CFD-E90L

SERVICE MANUAL

Ver 1.0 2004.02

AEP Model
UK Model

CD Section	Model Name Using Similar Mechanism	CFD-E95L
	CD Mechanism Type	KSM-213RDP
	Optical Pick-up Name	KSS-213R
TAPE Section	Model Name Using Similar Mechanism	CFD-E95L
	Tape Transport Mechanism Type	MF-E95

SPECIFICATIONS

CD player section

System
Compact disc digital audio system
Laser diode properties
Material: GaAlAs
Wave length: 780 nm
Emission duration: Continuous
Laser output: Less than 44.6 µW
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Spindle speed
200 r/min (rpm) to 500 r/min (rpm) (CLV)
Number of channels
2
Frequency response
20 - 20 000 Hz
Wow and flutter
Below measurable limit

Radio section

Frequency range

FM	87.5 - 108 MHz
MW	531 - 1 611 kHz (9 kHz step) 530 - 1 610 kHz (10 kHz step)
LW	153 - 279 kHz

IF
FM: 10.7 MHz
MW/LW: 450 kHz
Aerials
FM: Telescopic aerial
MW/LW: Built-in ferrite bar aerial

Cassette-corder section

Recording system
4-track 2 channel stereo
Fast winding time
Approx. 110 sec. with Sony cassette C-60
Frequency response
TYPE I (normal): 50 - 15 000 Hz

General

Speaker
Full range: 8 cm (3 ¼ in.) dia., 4 Ω, cone type (2)
Outputs
Headphones jack (stereo minijack)
For 16 - 68 Ω impedance headphones
Maximum power output
4 W
Power requirements
For CD radio cassette-corder:
230 V AC, 50 Hz
9 V DC, 6 R14 (size C) batteries
For memory back-up:
4.5 V DC, 3 R6 (size AA) batteries
For remote control:
3 V DC, 2 R03 (size AAA) batteries
Power consumption
AC 14 W

Battery life
For CD radio cassette-corder:

FM recording
Sony R14P: approx. 13.5 h
Sony alkaline LR14: approx. 20 h
Tape playback
Sony R14P: approx. 7.5 h
Sony alkaline LR14: approx. 15 h
CD playback
Sony R14P: approx. 2.5 h
Sony alkaline LR14: approx. 7 h

Dimensions
Approx. 272 × 164 × 285 mm (w/h/d)
(10 ¾ × 6 ½ × 11 ¼ inches) (incl. projecting parts)
Mass
Approx. 3 kg (6 lb. 10 oz) (incl. batteries)
Supplied accessories
Mains lead (1)
Remote control (1)

Design and specifications are subject to change without notice.

CD RADIO CASSETTE-CORDER

9-877-528-01
2004B05-1
© 2004.02
Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

This file was downloaded and provided FREE OF CHARGE from the ManualDirectory community.

You can find many free to download Service Manuals & Schematics at

http://www.manualdirectory.co.uk

TABLE OF CONTENTS

1. SERVICING NOTES 3

2. GENERAL 4

3. DISASSEMBLY

3-1. Disassembly Flow 7
3-2. Cabinet Upper Assy 7
3-3. POWER Board 8
3-4. TUNER Board 8
3-5. MAIN Board 9
3-6. CD Mechanism Deck (KSM-213RDP) 9
3-7. Optical Pick-up (KSS-213R) 10
3-8. Cabinet Front Section 10
3-9. Tape Mechanism Deck (MF-E95) 11
3-10. R/P Head (HRP301) 11
3-11. Main Belt (B), Sub Belt (B) 12
3-12. CD Lid 12
3-13. D-out Assy 13
3-14. D-OUT Board 13

4. MECHANICAL ADJUSTMENTS 14

5. ELECTRICAL ADJUSTMENTS

Tape Deck Section 14
Tuner Section 15
CD Section 17

6. DIAGRAMS

6-1. Block Diagram – CD Section – 19
6-2 Block Diagram – TUNER Section – 20
6-3. Block Diagram – MAIN Section – 21
6-4. Block Diagram – POWER SUPPLY Section – 22
6-5. Note for Printed Wiring Boards and Schematic Diagrams 23
6-6. Printed Wiring Board – CD Section – 24
6-7. Schematic Diagram – CD Section – 25
6-8. Printed Wiring Board – TUNER Section – 26
6-9. Schematic Diagram – TUNER Section – 27
6-10. Printed Wiring Board – TAPE DECK Section – 28
6-11. Schematic Diagram – TAPE DECK Section – 28
6-12. Printed Wiring Boards – MAIN Section – 29
6-13. Schematic Diagram – MAIN Section (1/2) – 30
6-14. Schematic Diagram – MAIN Section (2/2) – 31
6-15. Printed Wiring Boards – PANEL Section – 32
6-16. Schematic Diagram – PANEL Section – 33
6-17. Printed Wiring Boards – POWER Section – 34
6-18. Schematic Diagram – POWER Section – 35

7. EXPLODED VIEWS

7-1. Overall Section 41
7-2. Cabinet Front Section 42
7-3. Panel Section 43
7-4. LCD Board Section 44
7-5. MD Block Section 45
7-6. Cabinet Upper Section 46
7-7. Cabinet Under Section 47
7-8. Speaker Box Section 48
7-9. CD Block Section 49
7-10. Optical Pick-up Section (KSM-213RDP) 50
7-11. Tape Mechanism Deck Section (MF-E95) 51

8. ELECTRICAL PARTS LIST 52

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

About CD-Rs/CD-RWs

This CD player can play CD-Rs/CD-RWs recorded in the CD-DA format*, but playback capability may vary depending on the quality of the disc and the condition of the recording device.

* CD-DA is the abbreviation for Compact Disc Digital Audio. It is a recording standard used for the Audio CDs.

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 ˚C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 ˚C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

During normal operation of the equipment, emission of the laser diode is prohibited unless the upper lid is closed while turning ON the S901. (push switch type)
The following checking method for the laser diode is operable.

- **Method**
  Emission of the laser diode is visually checked.

1. Open the upper lid.
2. Push the S901 as shown in Fig.1.

Note: Do not push the detection lever strongly, or it may be bent or damaged.

3. Press the ▶II button.
4. Check the object lens for confirming normal emission of the laser diode. If not emitting, there is a trouble in the automatic power control circuit or the optical pick-up.
   In this operation, the object lens will move up and down 2 times along with inward motion for the focus search.

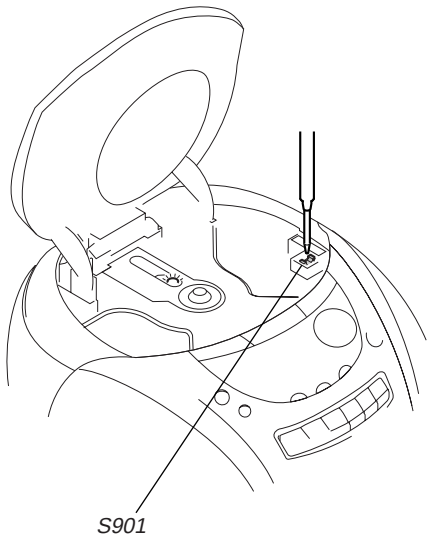
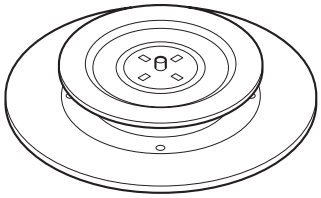


Fig.1 Method to push the S901

CHUCK PLATE JIG ON REPAIRING

On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

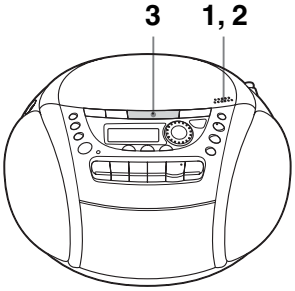
- Code number of Chuck Plate Jig: X-4918-255-1



SECTION 2
GENERAL

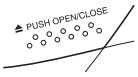
This section is extracted from instruction manual.

Playing a CD

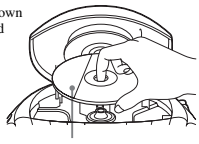


Connect the supplied mains lead.

1

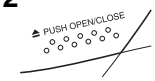


Press ⏏PUSH OPEN/CLOSE down to open the CD compartment and place the CD on the CD compartment.

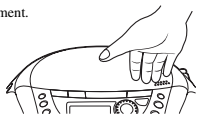


With the label side up

2



Close the lid of the CD compartment.



3

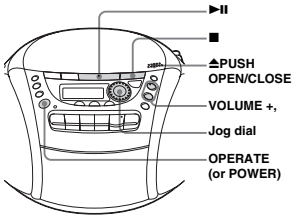
Press ⏯.

The player turns on (direct power-on) and plays all the tracks once.

Display

Track number Playing time

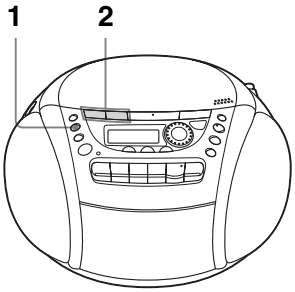
Use these buttons for additional operations



To	Do this
adjust the volume	Press VOLUME +*, (VOL +, on the remote).
stop playback	Press ■.
pause playback	Press ⏯*. Press the button again to resume play after pause.
go to the next track	Turn the jog dial clockwise. (On the remote, press ⏭.)
go back to the previous track	Turn the jog dial counterclockwise. (On the remote, press ⏮.)
remove the CD	Press ⏏PUSH OPEN/CLOSE.
turn on/off the player	Press OPERATE (or POWER).

* The button has a tactile dot.

Listening to the radio



Connect the supplied mains lead.

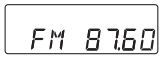
1

Press RADIO•BAND•AUTO PRESET until the band you want appears in the display (direct power-on).

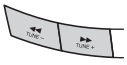
Each time you press the button, the band changes as follows:

"FM" → "MW" → "LW"

Display



2

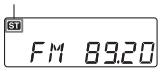


Hold down TUNE + or TUNE – until the frequency digits begin to change in the display.

The player automatically scans the radio frequencies and stops when it finds a clear station.

If you can't tune in a station, press the button repeatedly to change the frequency step by step.

Indicates an FM stereo broadcast

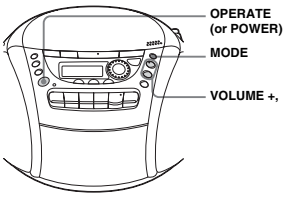


Tips

If the FM broadcast is noisy, press MODE until ○Mono○appears in the display and the radio will play in monaural.

If you need to change the MW tuning interval.

Use these buttons for additional operations



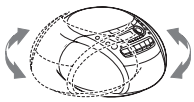
To	Press
adjust the volume	VOLUME +*, (VOL +, on the remote)
turn on/off the radio	OPERATE (or POWER)

* VOLUME + has a tactile dot.

To improve broadcast reception

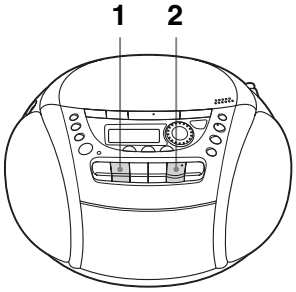
Reorient the aerial for FM. Reorient the player itself for MW/LW.

for FM



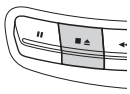
for MW/LW

Playing a tape



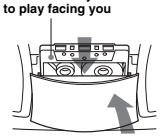
Connect the supplied mains lead.

1

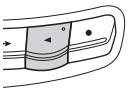


Press ■⏏ to open the tape compartment and insert a recorded tape. Use TYPE I (normal) tape only. Close the compartment.

With the side you want to play facing you



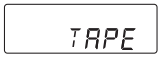
2



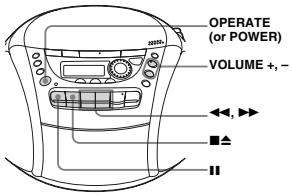
Press ◄.

The player turns on (direct power-on) and starts playing.

Display



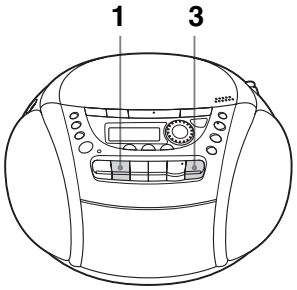
Use these buttons for additional operations



To	Press
adjust the volume	VOLUME +*, (VOL +, on the remote)
stop playback	■⏏
fast-forward or rewind the tape	◄◄ or ►►
pause playback	II Press the button again to resume play after pause.
eject the cassette	■⏏
turn on/off the player	OPERATE (or POWER)

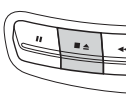
* VOLUME + and ◄ have a tactile dot.

Recording on a tape



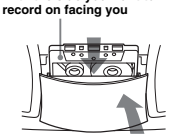
Connect the supplied mains lead.

1



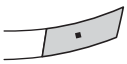
Press ■⏏ to open the tape compartment and insert a blank tape. Use TYPE I (normal) tape only.

With the side you want to record on facing you



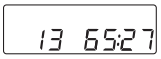
2

Select the programme source you want to record.

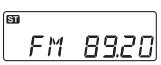


To record from the CD player, insert a CD and press ■ on the CD section.

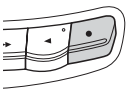
Display



To record from the radio, tune in the station you want.



3



Press ● to start recording (◄ is depressed automatically).

Tips

Adjusting the volume or the audio emphasis will not affect the recording level.

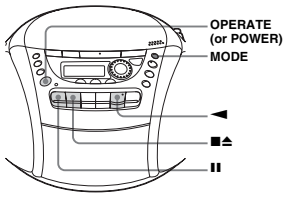
If the MW/LW programme makes a whistling sound after you ve pressed ● in step 3, press MODE to select select the position of ISS (Interference Suppress Switch) that decreases the noise the most.

For the best results, use the AC power as a power source.

To erase a recording, proceed as follows:

1 Insert the tape whose recording you want to erase.
2 Press FUNCTION on the remote repeatedly until ÒTAPEÓappears.
3 Press ●.

Use these buttons for additional operations



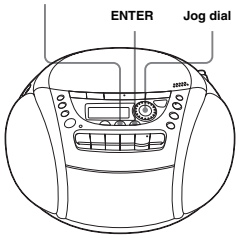
To	Press
stop recording	■⏏
pause recording	II Press the button again to resume recording.
turn on/off the player	OPERATE (or POWER)

The Timer

Setting the clock

Ò : Óindication appears in the display until you set the clock.

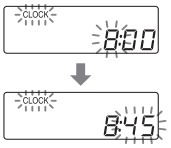
CLOCK/SLEEP/TIMER



Before you set the clock, connect the power source.

1 Hold down CLOCK/SLEEP/TIMER until ÒCLOCKÓappears in the display. The hour digit flashes.

2 Turn the jog dial to set the current hour. Then press ENTER.
The minute digits flash. Set the minutes by turning the jog dial until the correct minute is displayed.



3 Press ENTER.
The clock starts from 00 seconds.

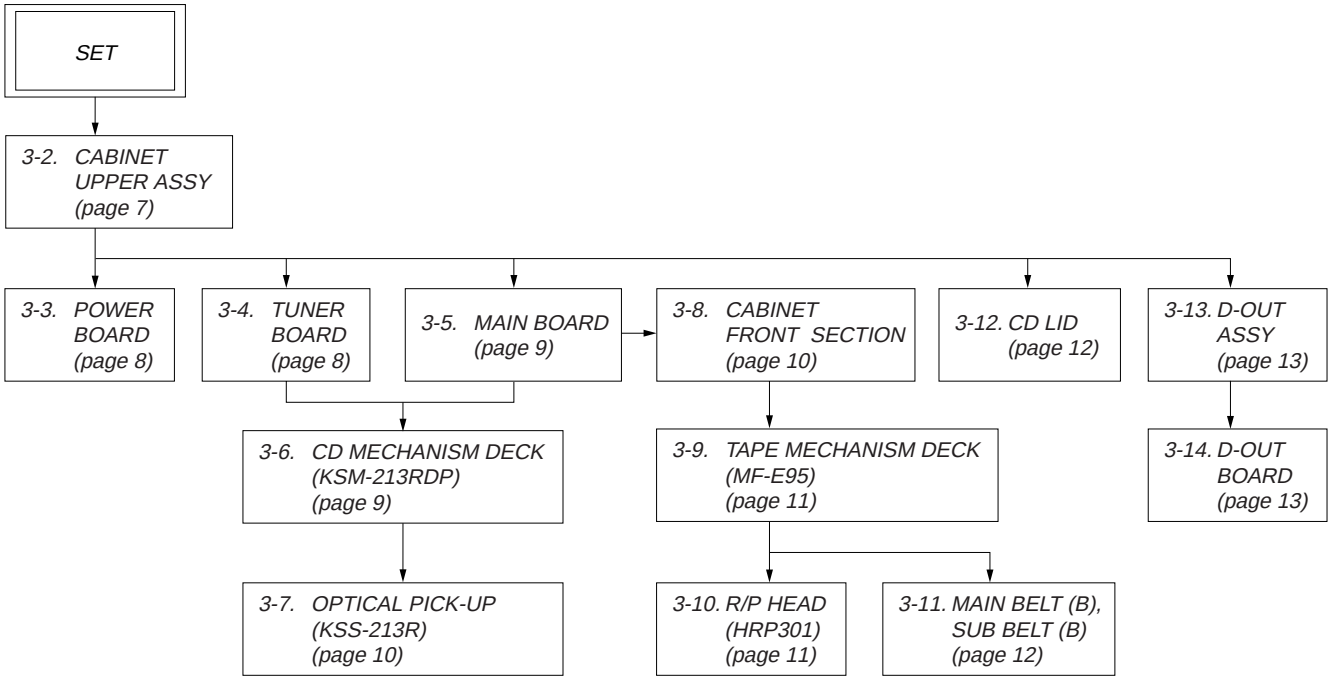
Tip

The time display system:
24-hour system

SECTION 3
DISASSEMBLY

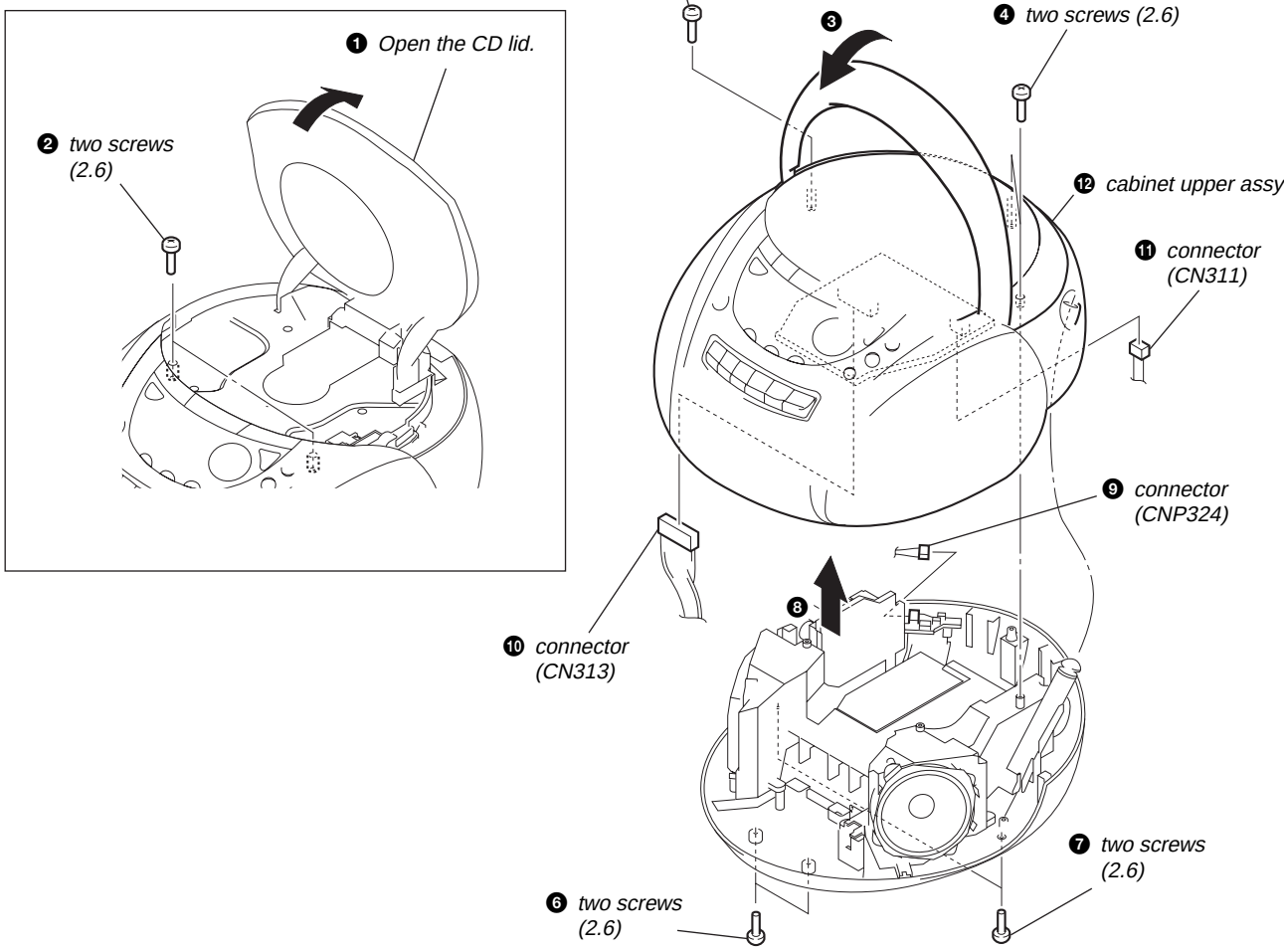
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

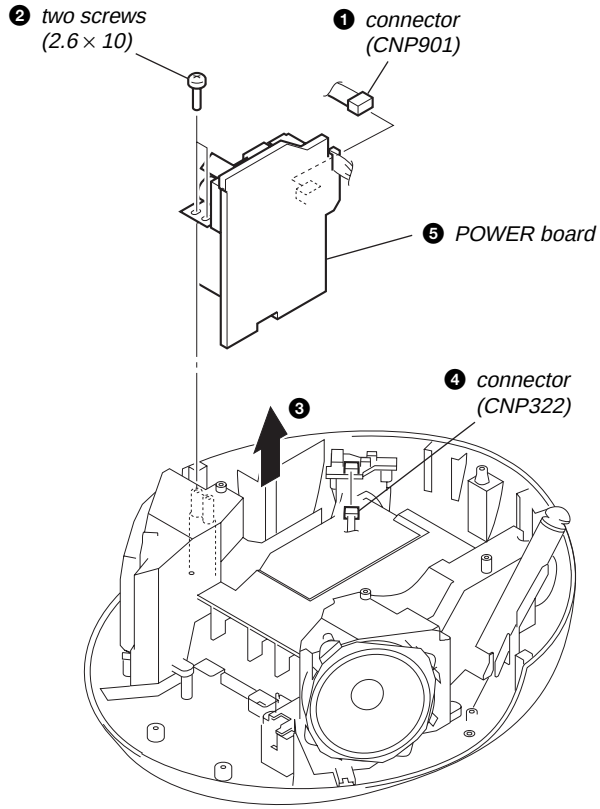

SET
3-2. CABINET UPPER ASSY (page 7)
3-3. POWER BOARD (page 8)
3-4. TUNER BOARD (page 8)
3-5. MAIN BOARD (page 9)
3-8. CABINET FRONT SECTION (page 10)
3-12. CD LID (page 12)
3-13. D-OUT ASSY (page 13)
3-6. CD MECHANISM DECK (KSM-213RDP) (page 9)
3-9. TAPE MECHANISM DECK (MF-E95) (page 11)
3-14. D-OUT BOARD (page 13)
3-7. OPTICAL PICK-UP (KSS-213R) (page 10)
3-10. R/P HEAD (HRP301) (page 11)
3-11. MAIN BELT (B), SUB BELT (B) (page 12)

Note: Follow the disassembly procedure in the numerical order given.

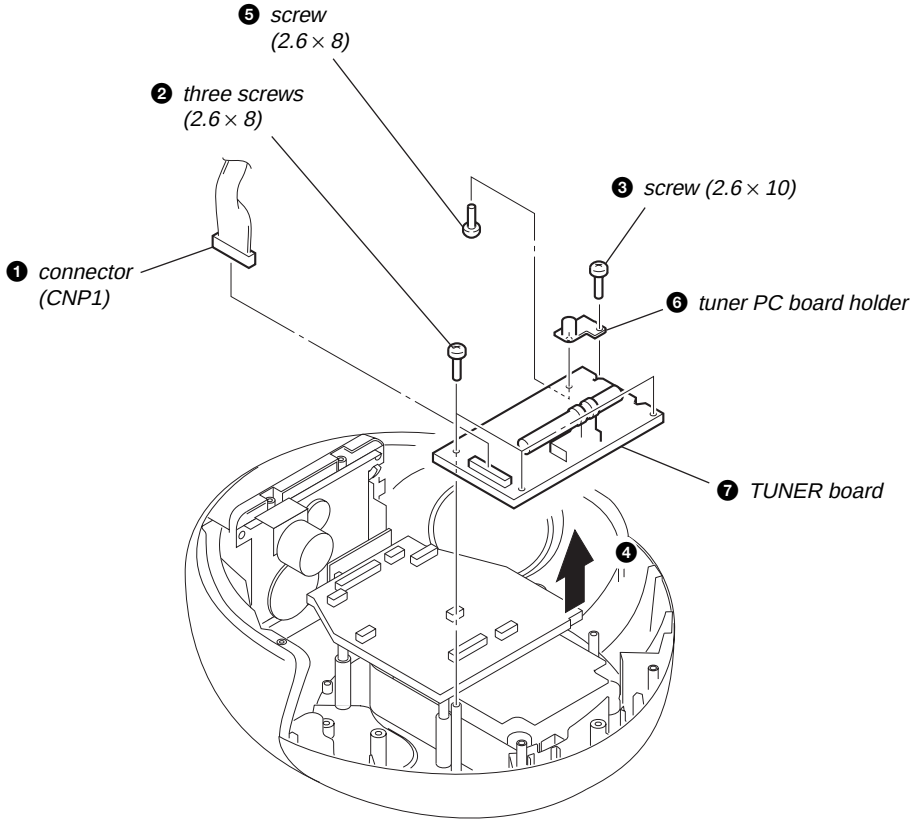
3-2. CABINET UPPER ASSY



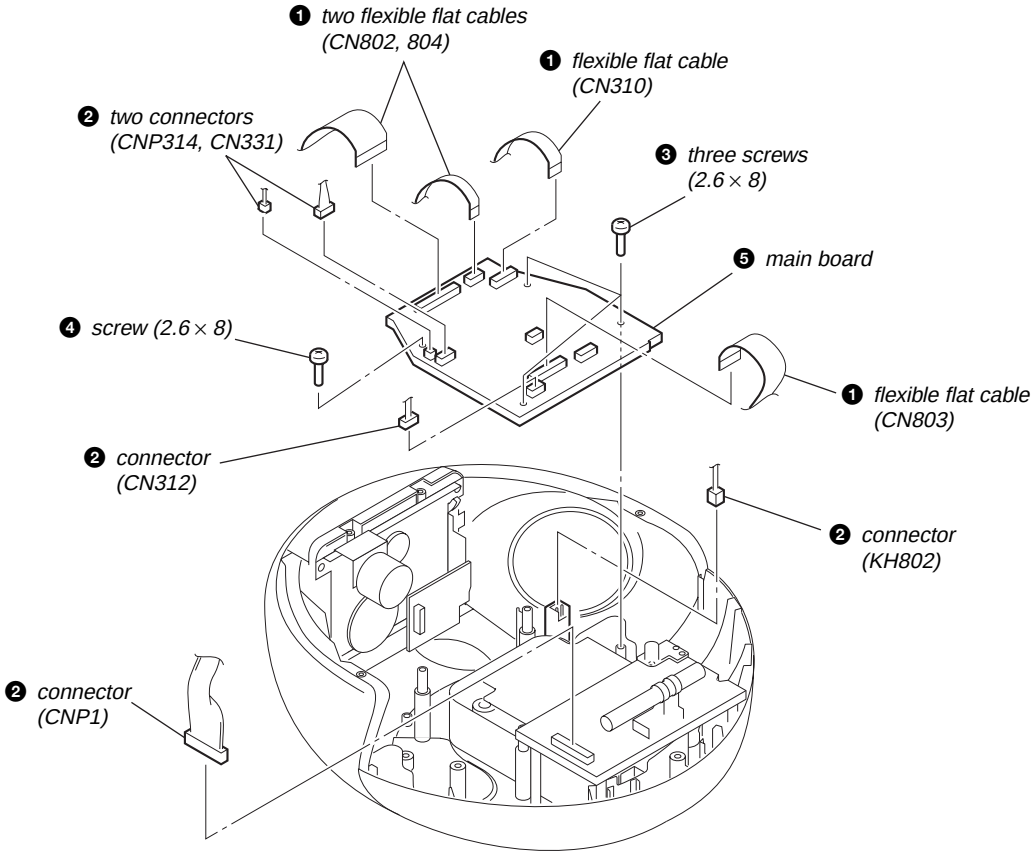
3-3. POWER BOARD



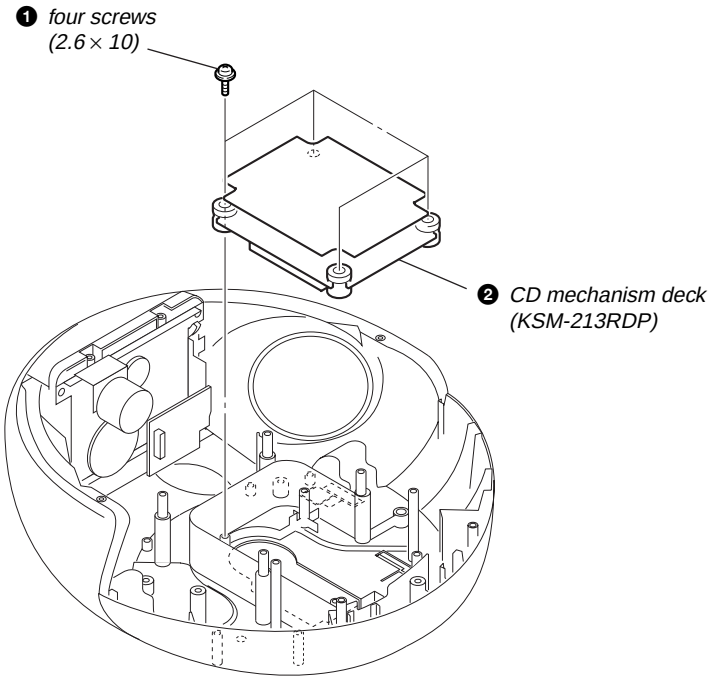
3-4. TUNER BOARD



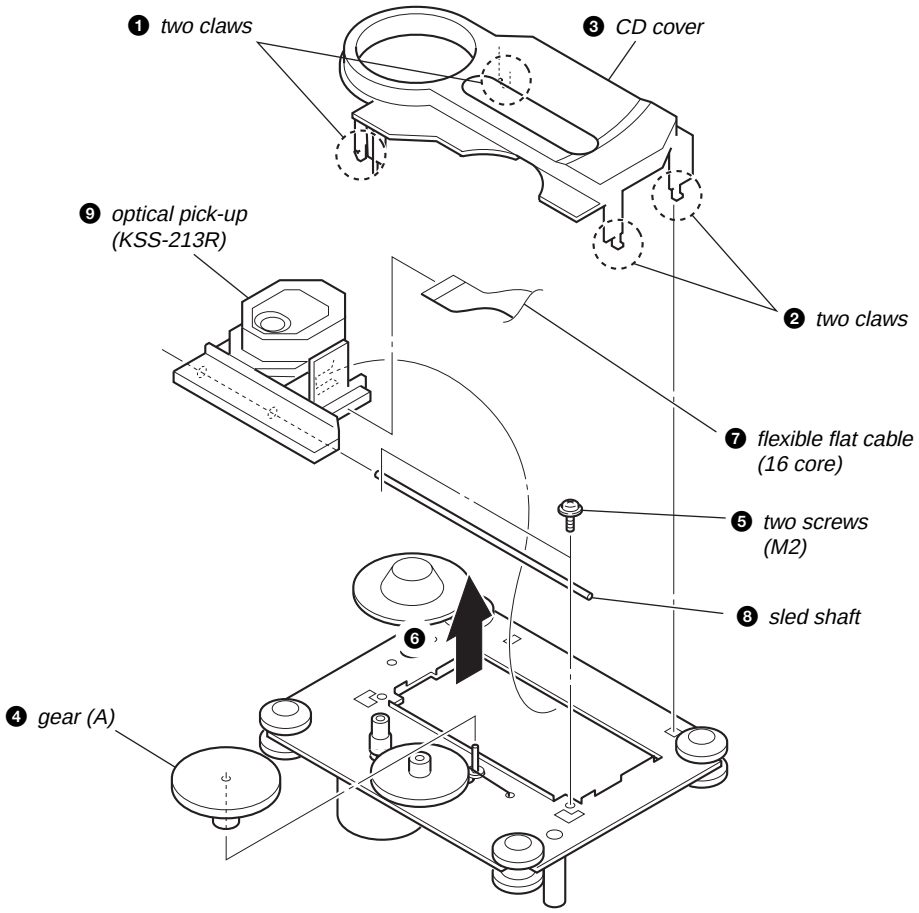
3-5. MAIN BOARD


❶ two flexible flat cables (CN802, 804)
❶ flexible flat cable (CN310)
❷ two connectors (CNP314, CN331)
❸ three screws (2.6 × 8)
❺ main board
❹ screw (2.6 × 8)
❶ flexible flat cable (CN803)
❷ connector (CN312)
❷ connector (KH802)
❷ connector (CNP1)

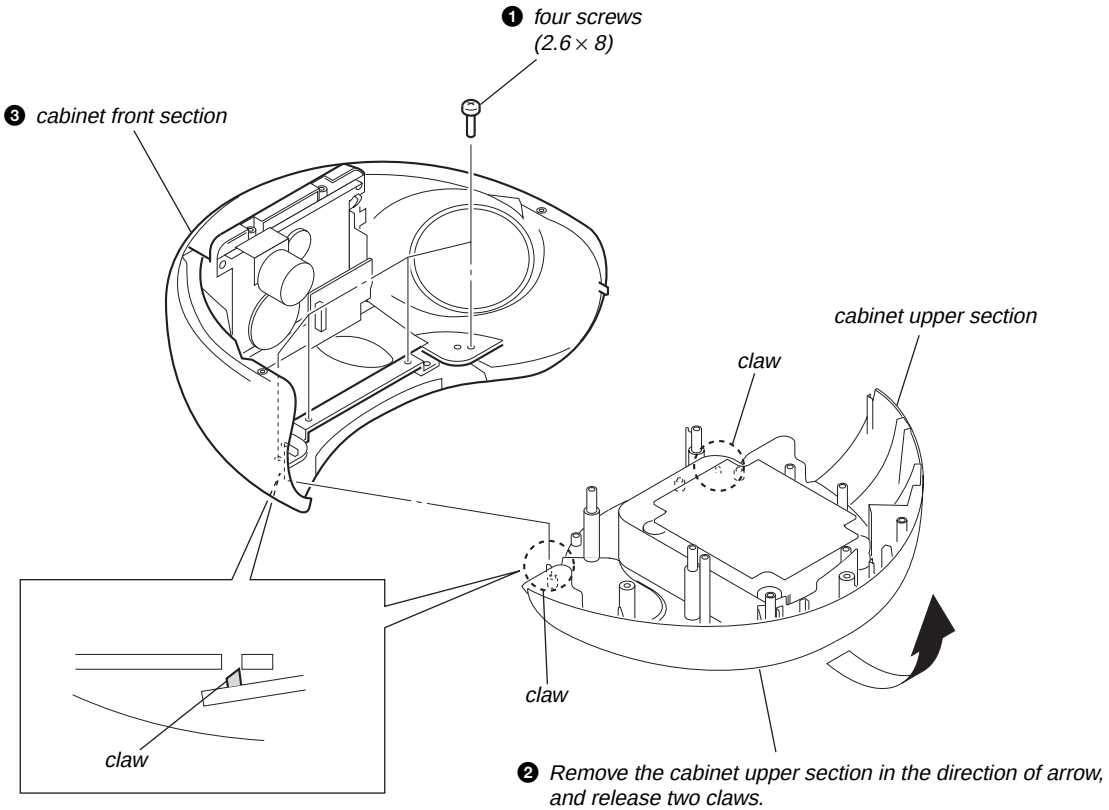
3-6. CD MECHANISM DECK (KSM-213RDP)



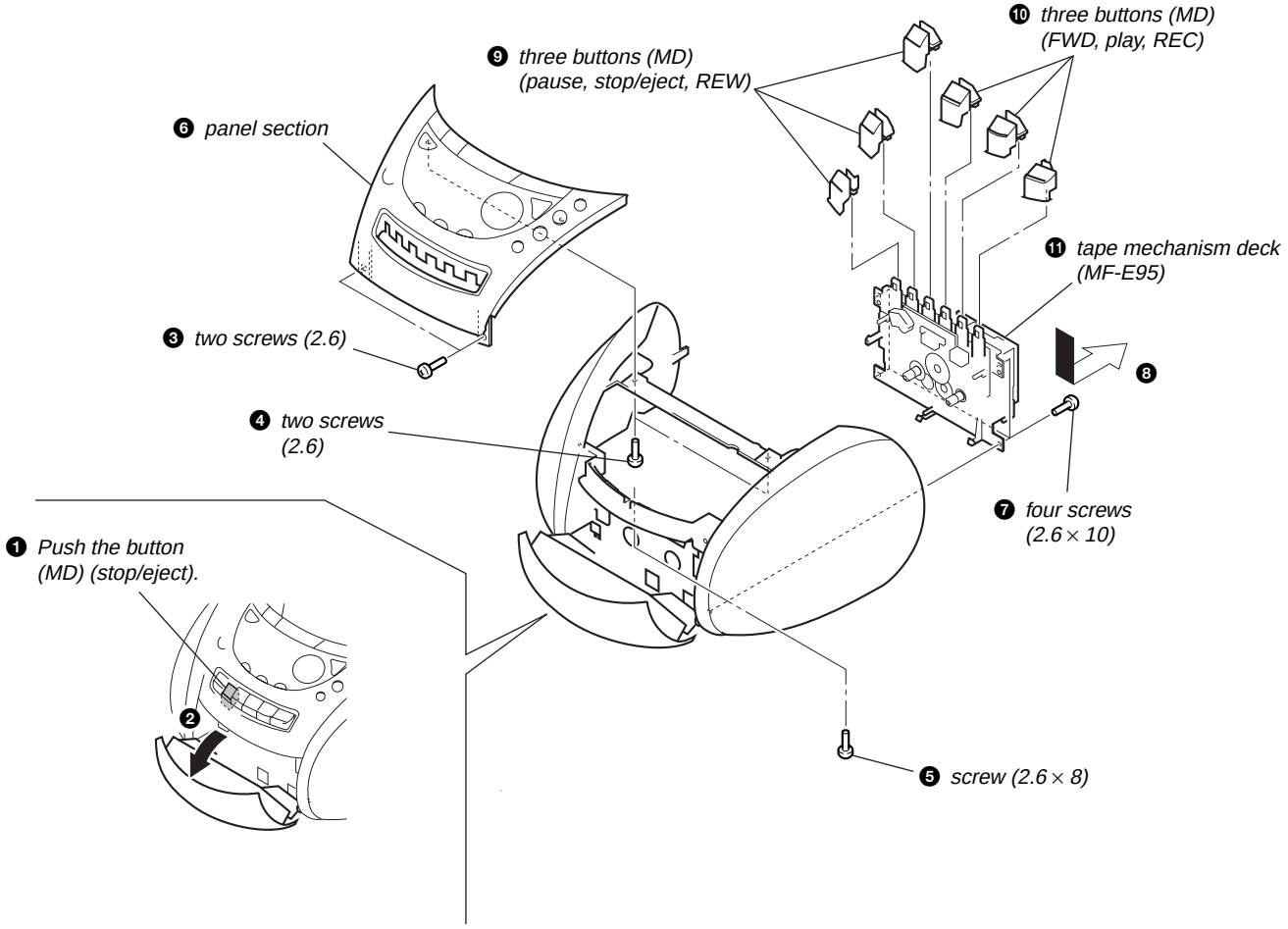
3-7. OPTICAL PICK-UP (KSS-213R)



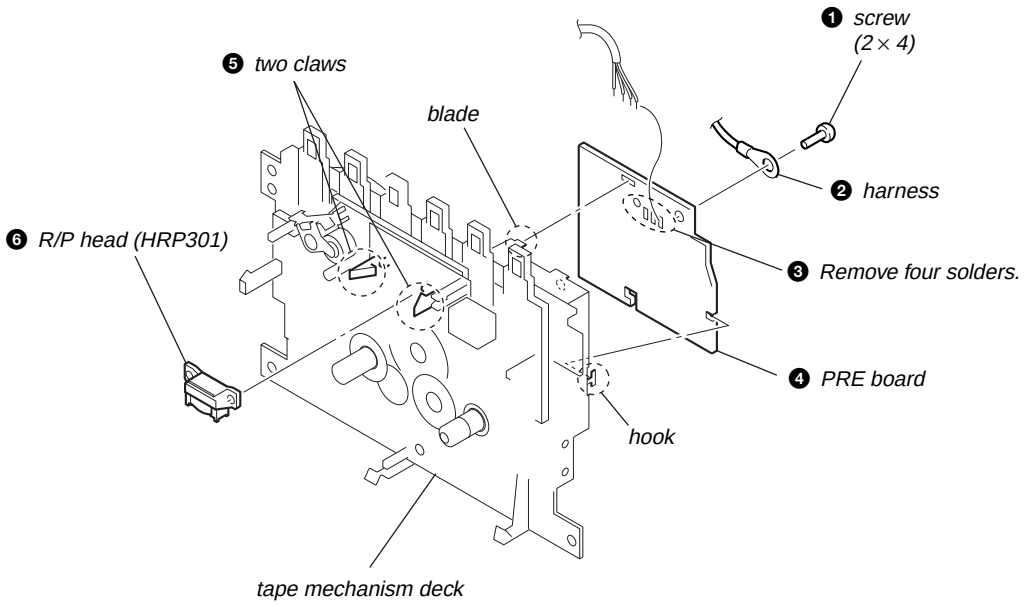
3-8. CABINET FRONT SECTION


❶ four screws (2.6 × 8)
❸ cabinet front section
cabinet upper section
claw
claw
claw
❷ Remove the cabinet upper section in the direction of arrow, and release two claws.

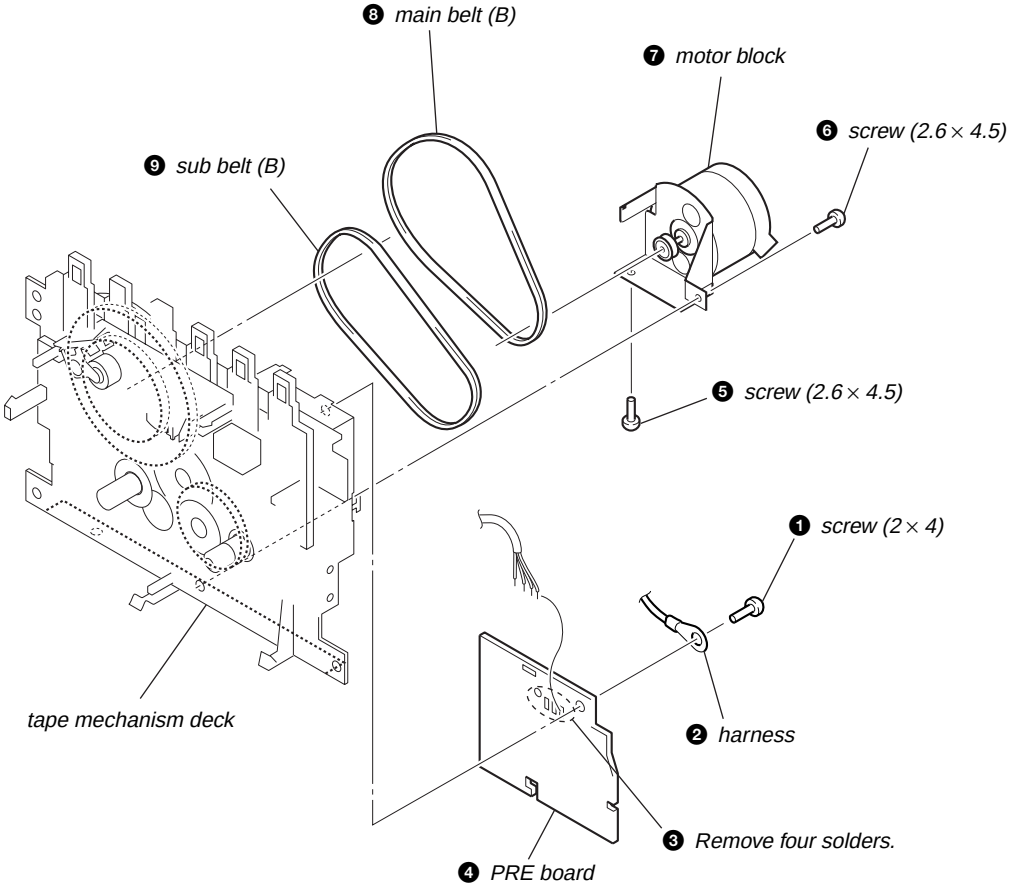
3-9. TAPE MECHANISM DECK (MF-E95)


❿ three buttons (MD) (FWD, play, REC)
❾ three buttons (MD) (pause, stop/eject, REW)
❻ panel section
⓫ tape mechanism deck (MF-E95)
❸ two screws (2.6)
❽
❹ two screws (2.6)
❼ four screws (2.6 × 10)
❶ Push the button (MD) (stop/eject).
❷
❺ screw (2.6 × 8)

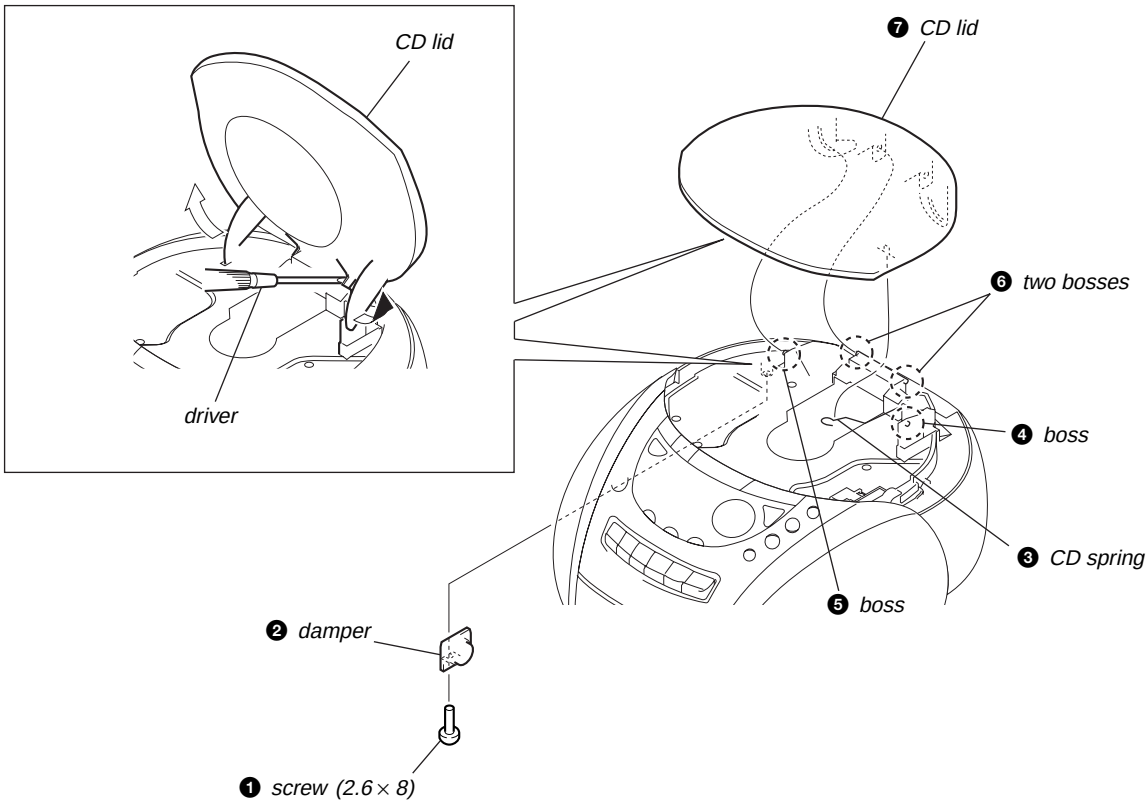
3-10. R/P HEAD (HRP301)



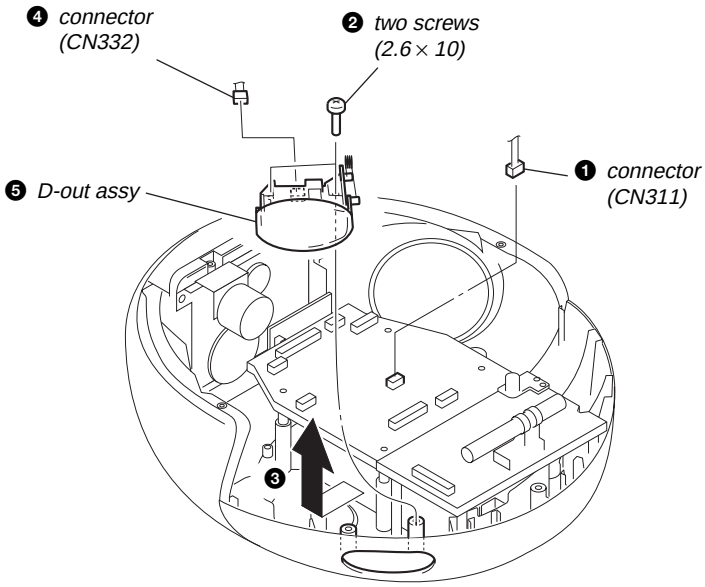
3-11. MAIN BELT (B), SUB BELT (B)



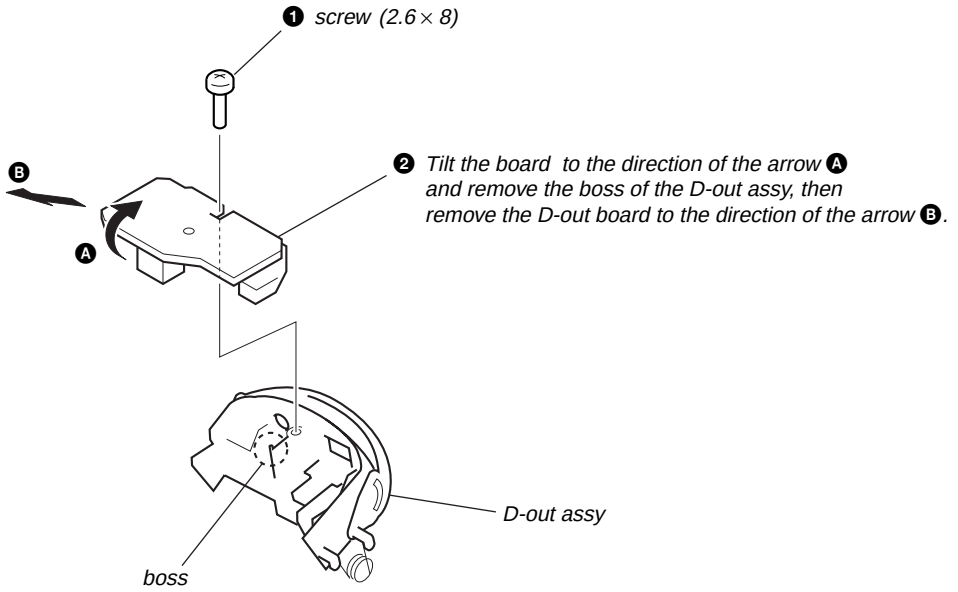
3-12. CD LID



3-13. D-OUT ASSY



3-14. D-OUT BOARD


❶ screw (2.6 × 8)
❷ Tilt the board to the direction of the arrow Ⓐ and remove the boss of the D-out assy, then remove the D-out board to the direction of the arrow Ⓑ.
Ⓑ
Ⓐ
D-out assy
boss

SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head, erase head, capstan, pinch roller, rubber belts, idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head magnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	2.95 – 6.86 mN•m (30 – 70 g•cm) (0.42 – 0.97 oz•inch)
FWD Back Tension	CQ-102C	0.15 – 5.39 mN•m (1.5 – 5.5 g•cm) (0.021 – 0.076 oz•inch)
FF	CQ-201B	more than 5.89 mN•m (more than 60 g•cm) (more than 0.83 oz•inch)
REW	CQ-201B	more than 5.89 mN•m (more than 60 g•cm) (more than 0.83 oz•inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 100 g (more than 3.53 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. Setting
   MEGABASS control : OFF

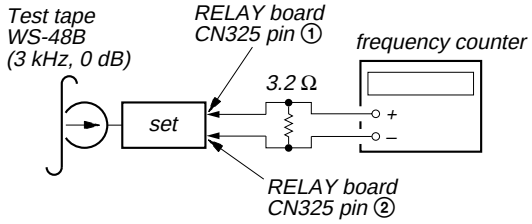
TAPE DECK SECTION | 0 dB=0.775 V

Test tape

Type	Signal	Used for
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

TAPE SPEED ADJUSTMENT

Setting:
Function: TAPE

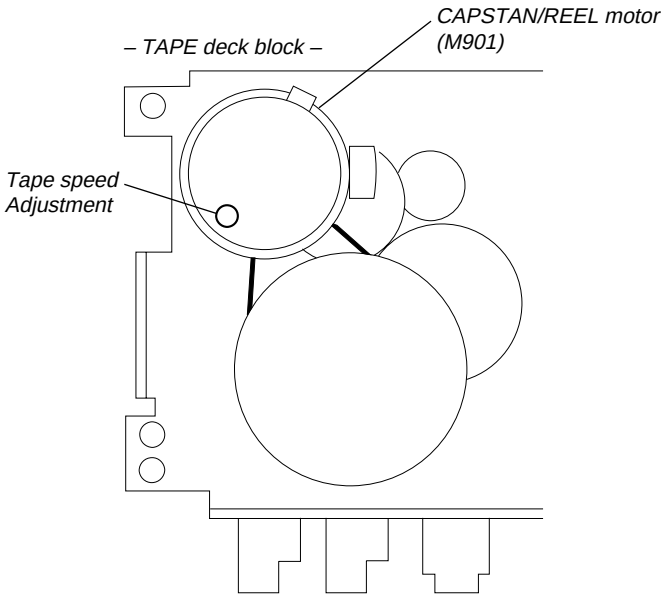


Procedure:
1. Playback WS-48B (tape center) in the FWD state.
2. Adjsut the volume in CAPSTAN/REEL motor (M901) so that the frequency counter reading becomes 3,000 Hz.

Specified Value: 2,910 to 3,090 Hz

3. Confirm that the frequency at the beginning and that at the end of tape winding are between 2,940 to 3,060 Hz.

Adjustment Location:



TUNER SECTION

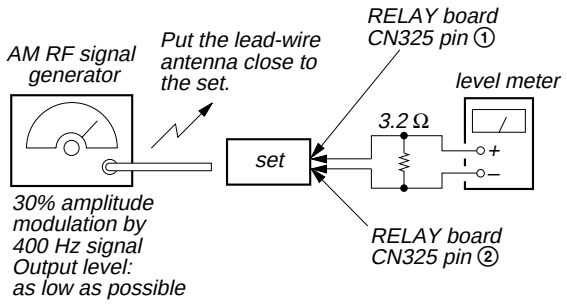
0 dB=1 µV

[MW/LW]

Setting:

Function : RADIO

BAND button : MW or LW

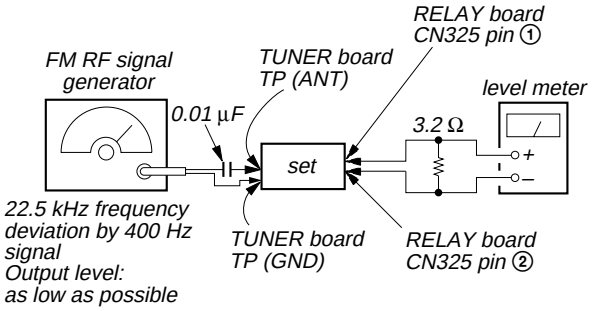


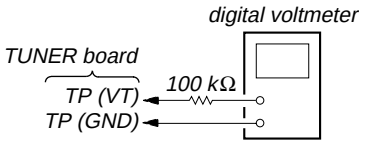
[FM]

Setting:

Function : RADIO

BAND button: FM





- Repeat the procedures in each adjustment several times, and the tracking adjustments should be finally done by the trimmer capacitors.
- Remove FM antenna in FM adjustment.

AM IF ADJUSTMENT	
Adjust for a maximum reading on level meter	
T1	450 kHz

MW VCO VOLTAGE CONFIRMATION	
Frequency Display	Reading on Digital Voltmeter
531 kHz	0.9 ± 0.4 V
1,611 kHz	5.2 ± 0.5 V

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L3-1	621 kHz
CT3	1,404 kHz

LW VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L4	153 kHz	0.6 ± 0.2 V
Confirmation	279 kHz	5.0 ± 0.1 V

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L3-2	162 kHz
CT5	261 kHz

FM IF ADJUSTMENT	
Adjust for a minimum reading on level meter	
T2	10.7 MHz

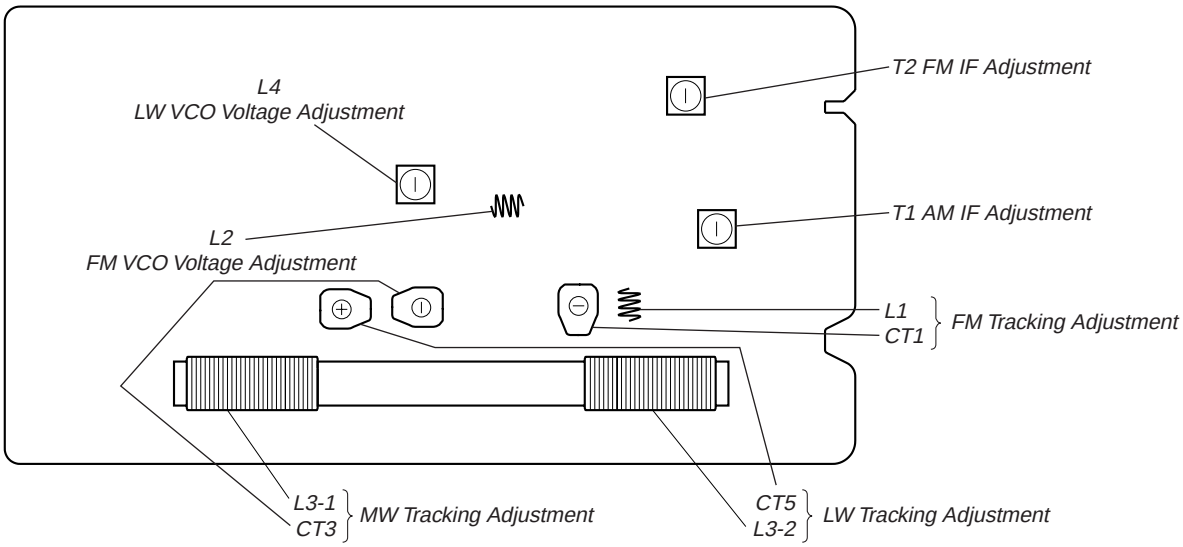
FM VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L2	108 MHz	3.0 ± 0.2 V
Confirmation	87.5 MHz	1.3 ± 0.3 V

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L1	87.5 MHz
CT1	108 MHz

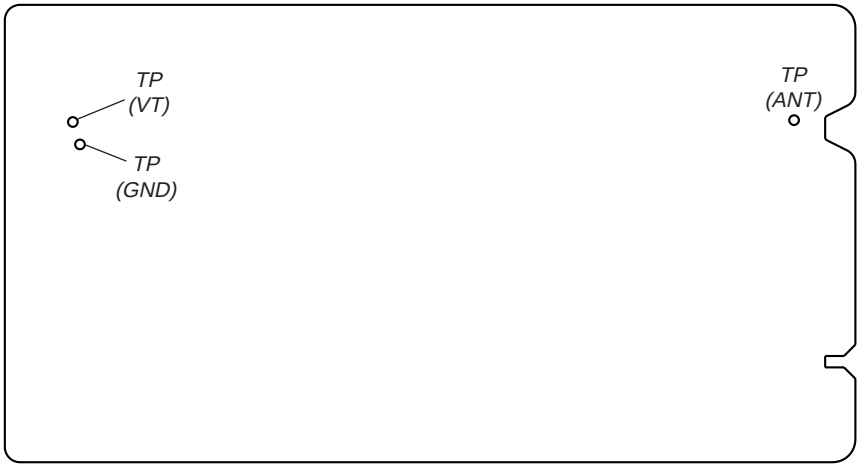
Adjustment Location: TUNER and RELAY board (See page 16)

Adjustment Location:

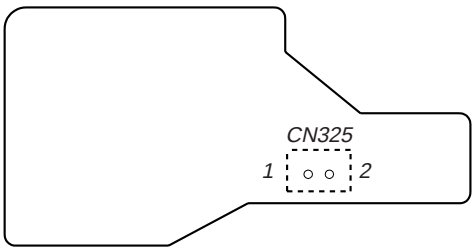
– TUNER BOARD (Component Side) –



– TUNER BOARD (Conductor Side) –



– RELAY BOARD (Conductor Side) –



CD SECTION

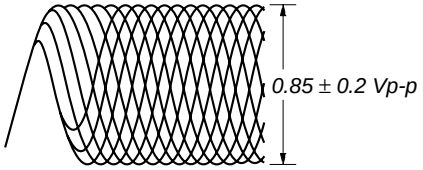
CD section adjustments are done automatically in this set.
In case of operation check, confirm that focus bias.

Focus Bias Check

1. Connect the oscilloscope to TP (RF) and TP (GND) on the CD board.
2. Insert the disc (YEDS-18). (Part No. : 3-702-101-01)
3. Press the ▶II button.
4. Confirm that the oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.

• RF signal reference waveform (eye pattern)

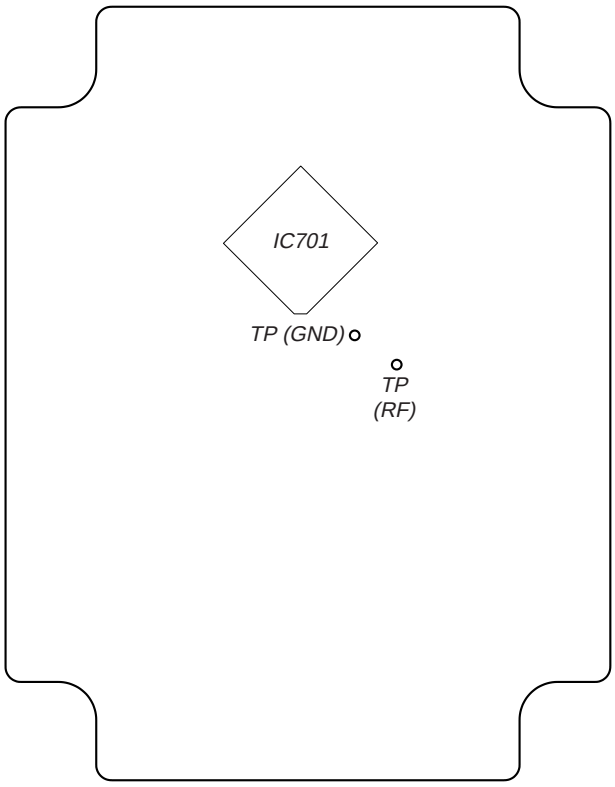
VOLT/DIV: 0.2 V (with the 10: 1 probe in use.)
TIME/DIV: 500 ns



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

Adjustment Location:

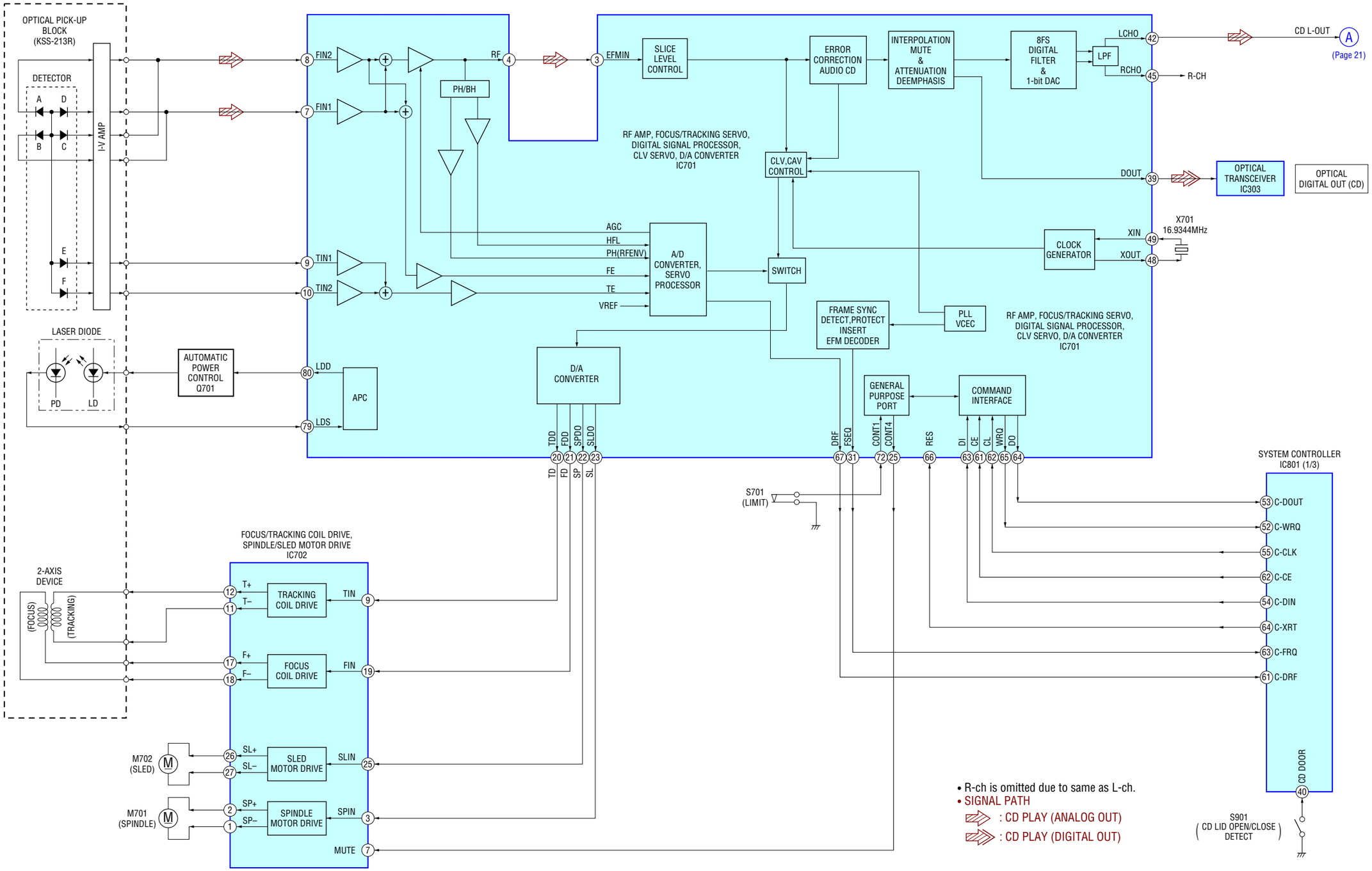
– CD BOARD (Conductor Side) –



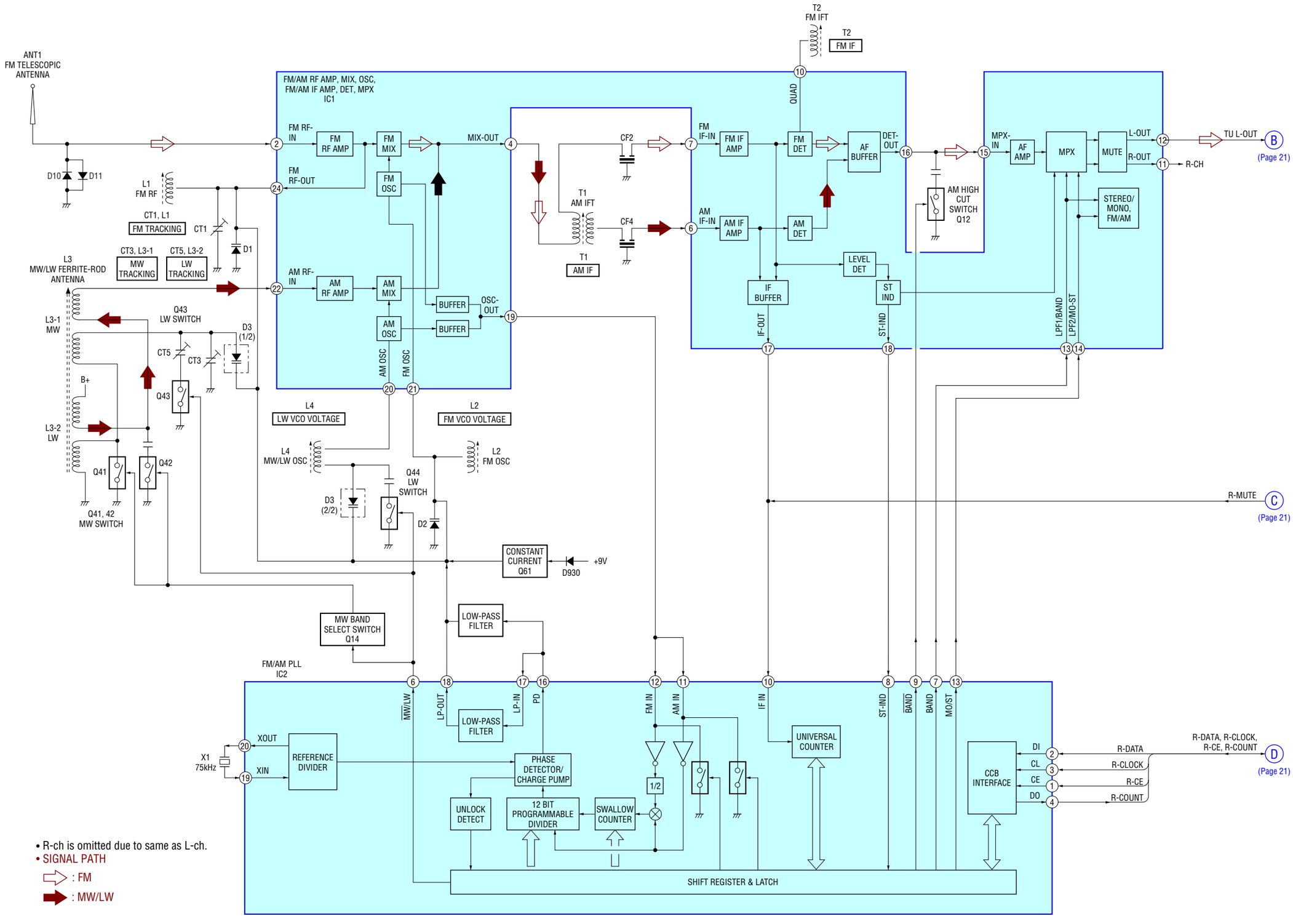
MEMO

SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM – CD Section –

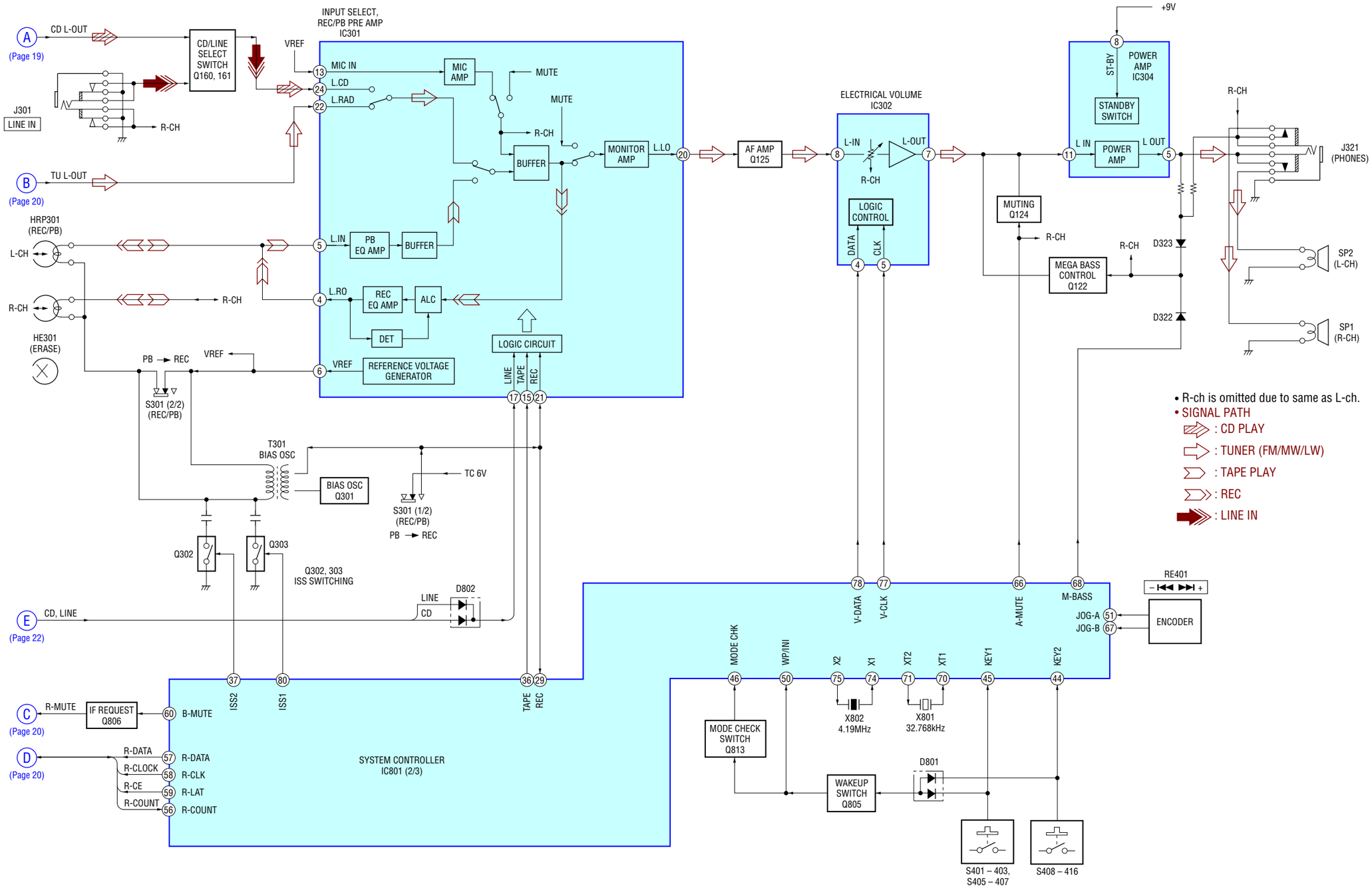


6-2. BLOCK DIAGRAM – TUNER Section –

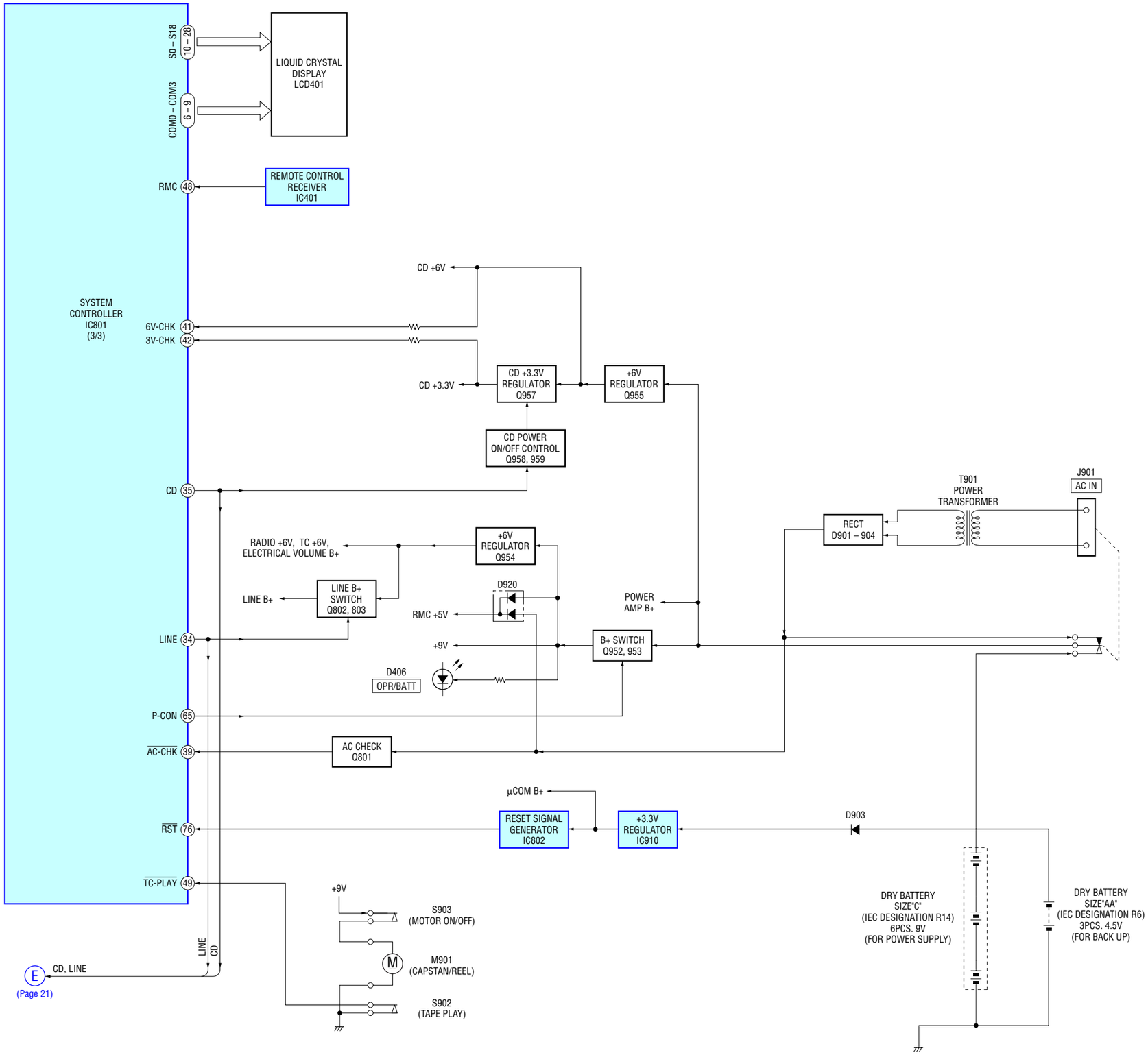


- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - ⇨ : FM
  - ➡ : MW/LW

6-3. BLOCK DIAGRAM – MAIN Section –



6-4. BLOCK DIAGRAM – POWER SUPPLY Section –



6-5. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS (In addition to this, the necessary note is printed in each block)

Note on Printed Wiring Boards:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- : indicates side identified with part number.
- △ : internal component.
- : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

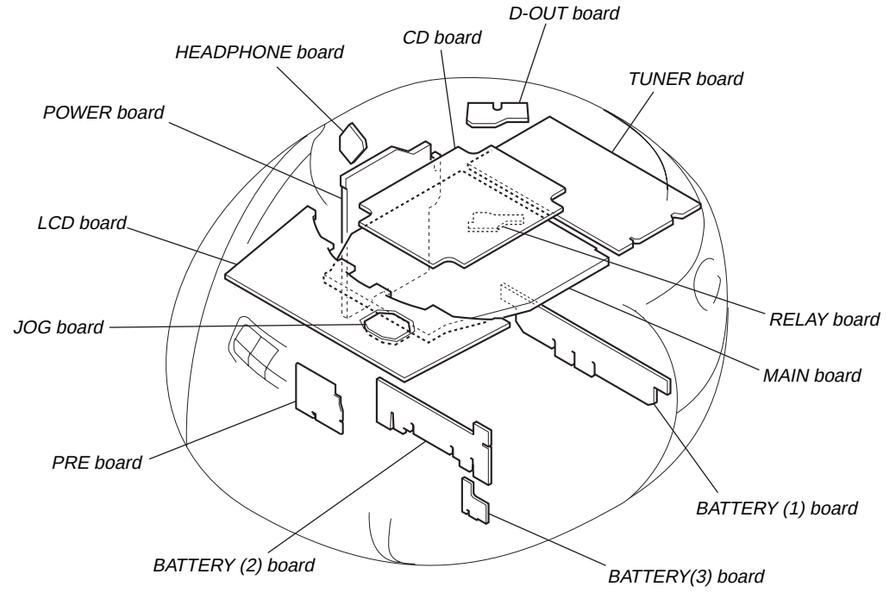
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

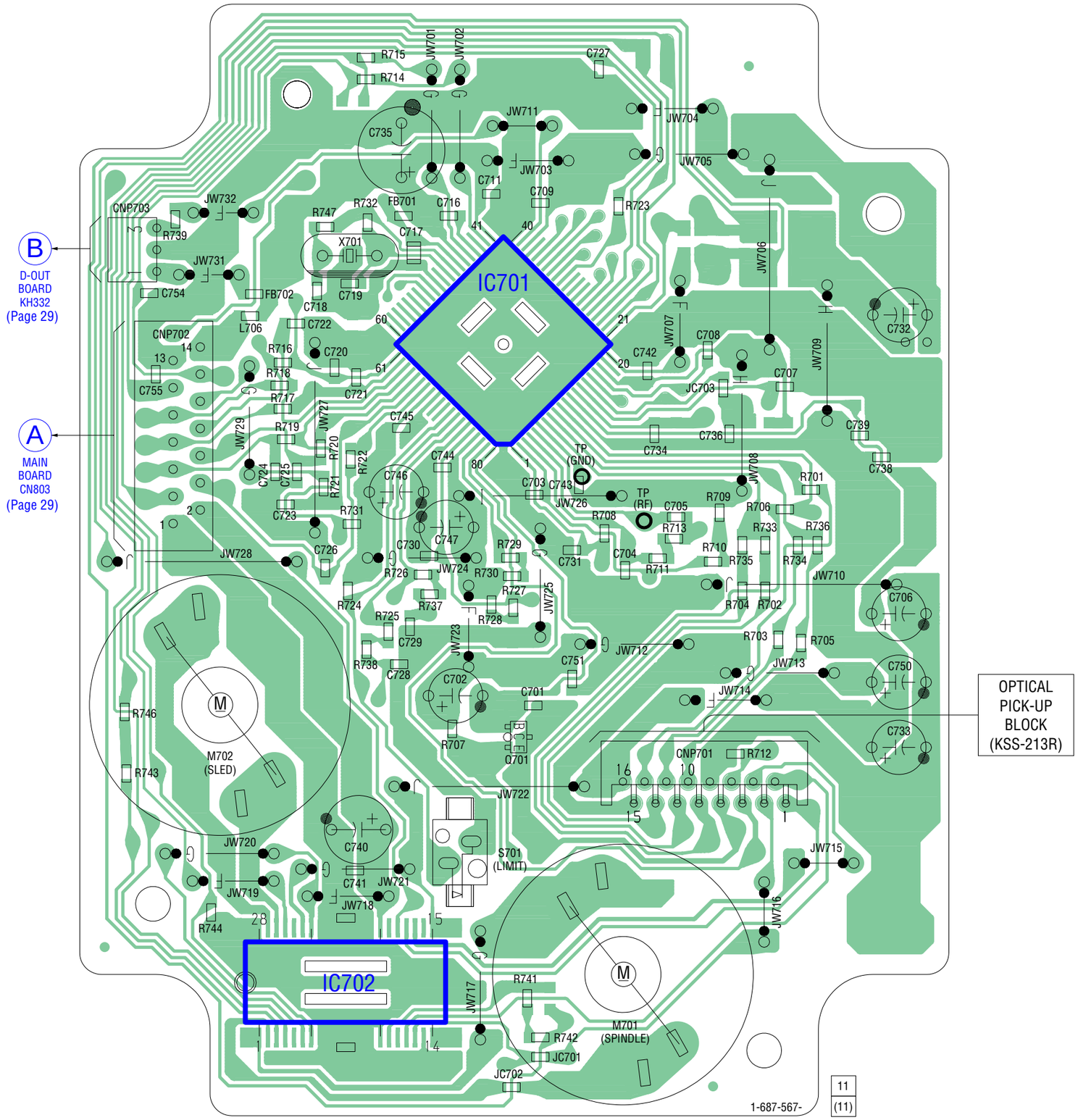
- : B+ Line.
- : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 9 V and fed with regulated dc power supply from battery terminal.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : MW/LW
  - : TAPE PLAY
  - : REC
  - : CD PLAY (ANALOG OUT)
  - : CD PLAY (DIGITAL OUT)
  - : LINE IN

- **Circuit Boards Location**



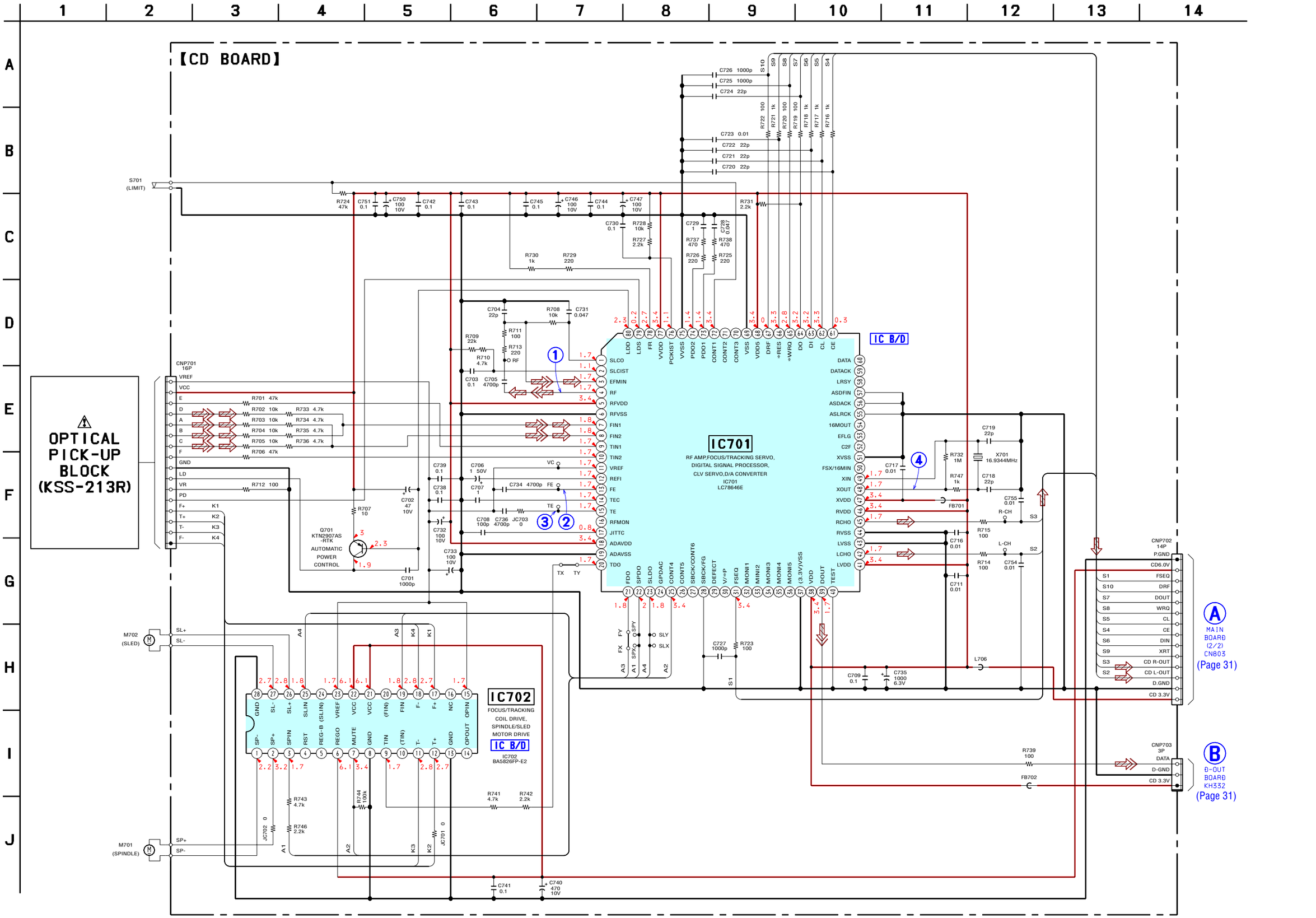
6-6. PRINTED WIRING BOARD – CD Section – • See page 23 for Circuit Boards Location. :Uses unleaded solder.

【CD BOARD】



6-7. SCHEMATIC DIAGRAM – CD Section –

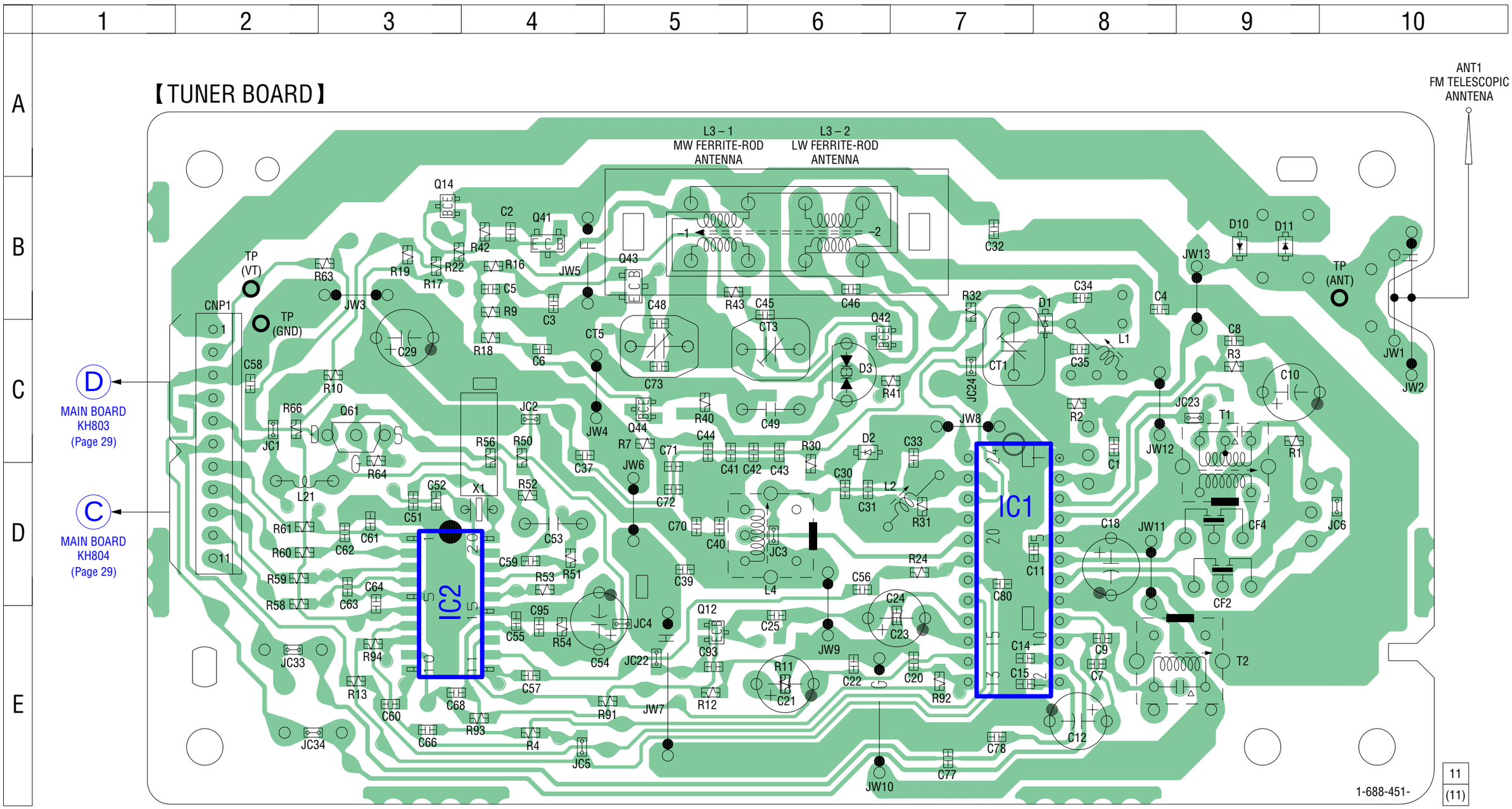
• See page 36 for Waveforms. • See page 36 for IC Block Diagrams.



• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD PLAY

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

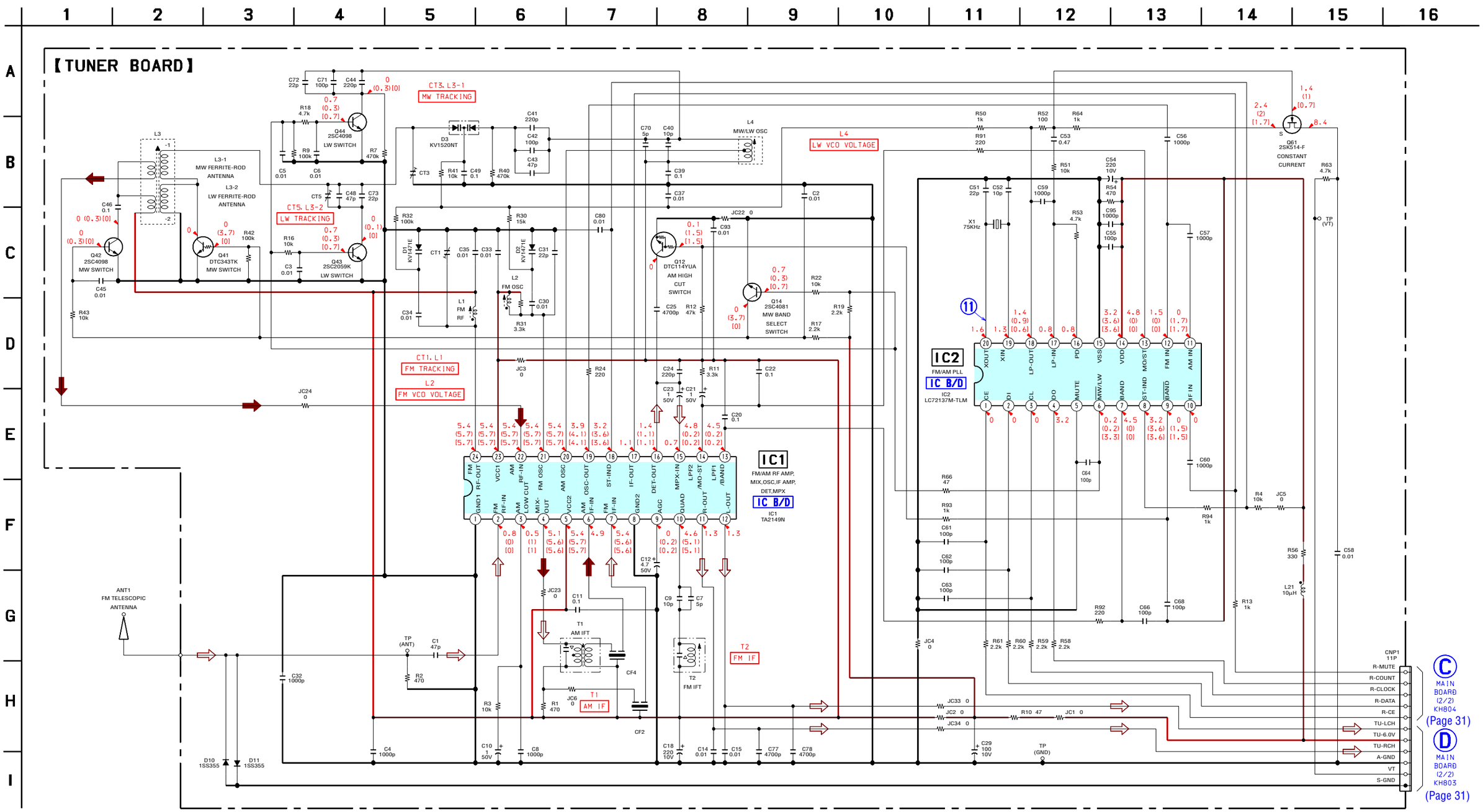
6-8. PRINTED WIRING BOARD – TUNER Section – • See page 23 for Circuit Boards Location. **:Uses unleaded solder.**



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	C-8	Q12	E-5
D2	C-6	Q14	B-3
D3	C-6	Q41	B-4
D10	B-9	Q42	C-6
D11	B-9	Q43	B-5
		Q44	C-5
IC1	D-7	Q61	C-3
IC2	D-3		

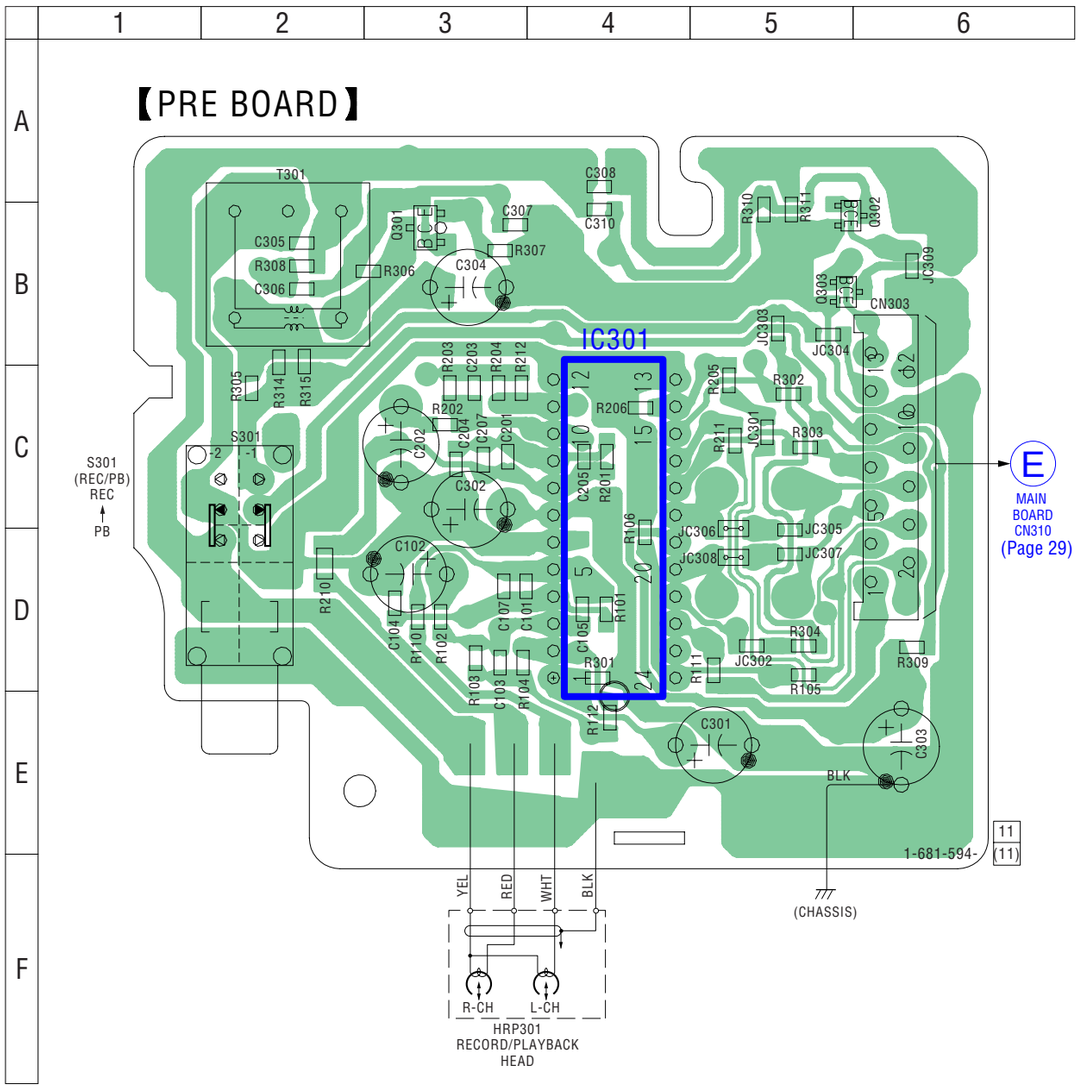
6-9. SCHEMATIC DIAGRAM – TUNER Section – • See page 36 for Waveform. • See page 36 for IC Block Diagrams.



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW

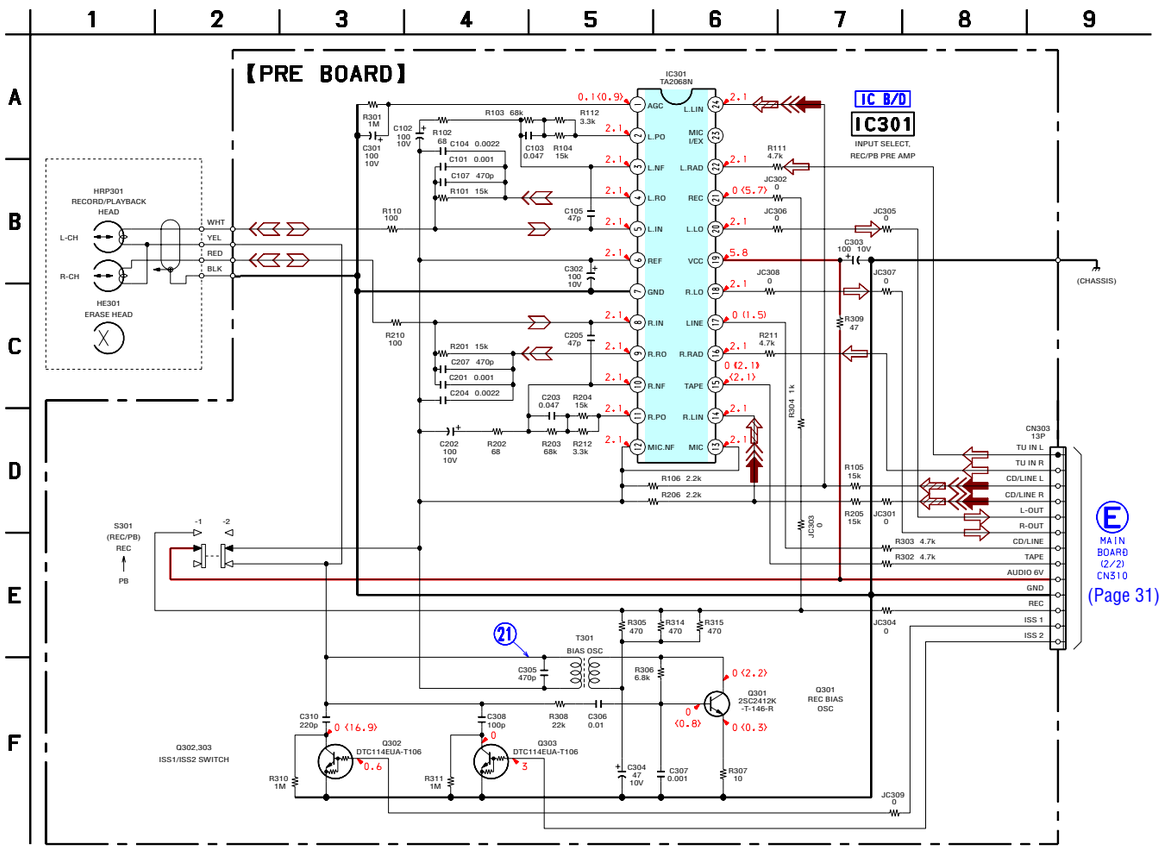
6-10. PRINTED WIRING BOARD – TAPE DECK Section –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.



6-11. SCHEMATIC DIAGRAM – TAPE DECK Section –

• See page 36 for Waveform. • See page 36 for IC Block Diagram.



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : TUNER
( ) : CD PLAY
⟨⟨ ⟩⟩ : TAPE PLAY
{ } : REC

6-12. PRINTED WIRING BOARDS – MAIN Section –

• See page 23 for Circuit Boards Location. :Uses unleaded solder.

【D-OUT BOARD】

【MAIN BOARD】

IC303

IC802

IC801

IC302

OPTICAL DIGITAL OUT (CD)

J301 LINE IN

CD BOARD CNP703 (Page 24)

CD BOARD CNP702 (Page 24)

TUNER BOARD CNP1 (Page 26)

TUNER BOARD CNP1 (Page 26)

POWER BOARD KH311 (Page 34)

POWER BOARD KH311 (Page 34)

S902 (TAPE PLAY)

S903 (MOTOR ON/OFF)

M901 (CAPSTAN/REEL)

LCD BOARD CNJ314 (Page 32)

S901 CD LID OPEN/CLOSE DETECT

PRE BOARD CN303 (Page 28)

LCD BOARD (Page 32)

LCD BOARD (Page 32)

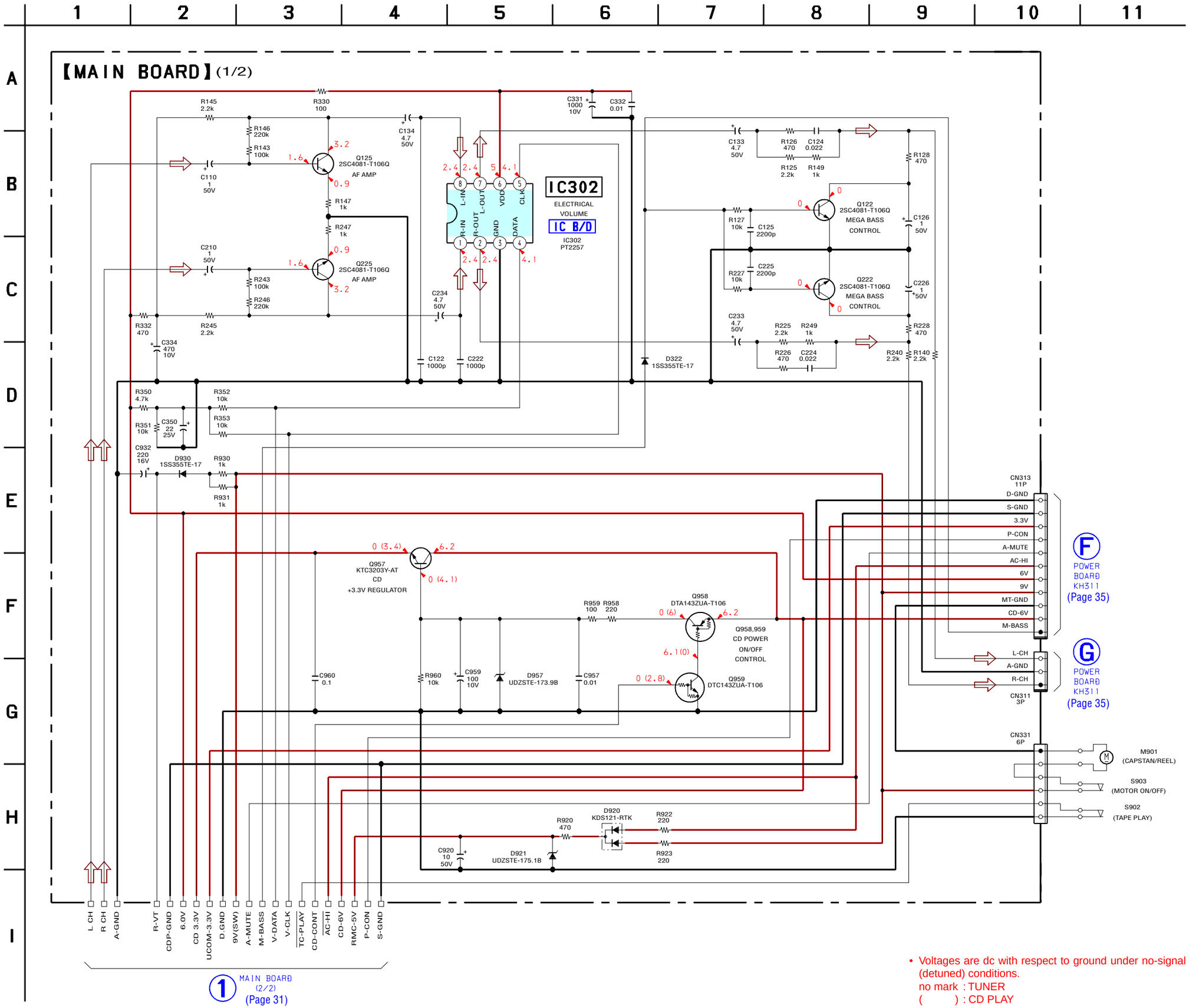
1-687-484-

1-687-480-

• **Semiconductor Location**

Ref. No.	Location
D322	E-5
D801	F-9
D802	I-11
D920	F-6
D921	I-6
D930	B-9
D957	D-7
IC302	E-12
IC303	B-2
IC801	G-8
IC802	F-6
Q122	C-11
Q125	F-12
Q160	D-10
Q161	C-10
Q222	C-11
Q225	E-12
Q260	D-11
Q261	C-11
Q801	H-10
Q802	C-10
Q803	C-10
Q805	F-9
Q806	E-6
Q813	F-9
Q957	C-7
Q958	D-6
Q959	D-6

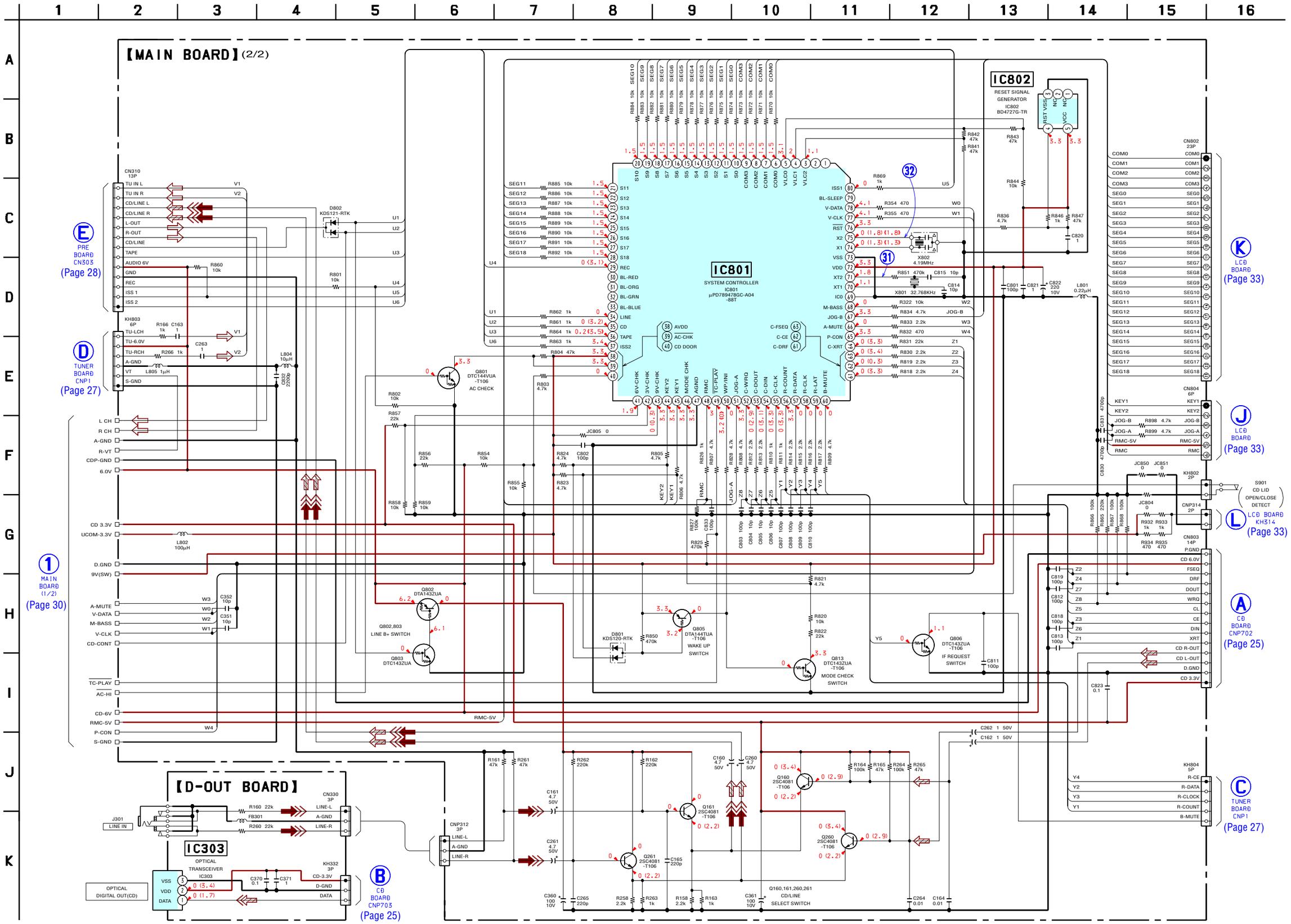
6-13. SCHEMATIC DIAGRAM – MAIN Section (1/2) – • See page 36 for IC Block Diagram.



- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : TUNER
  ( ) : CD PLAY

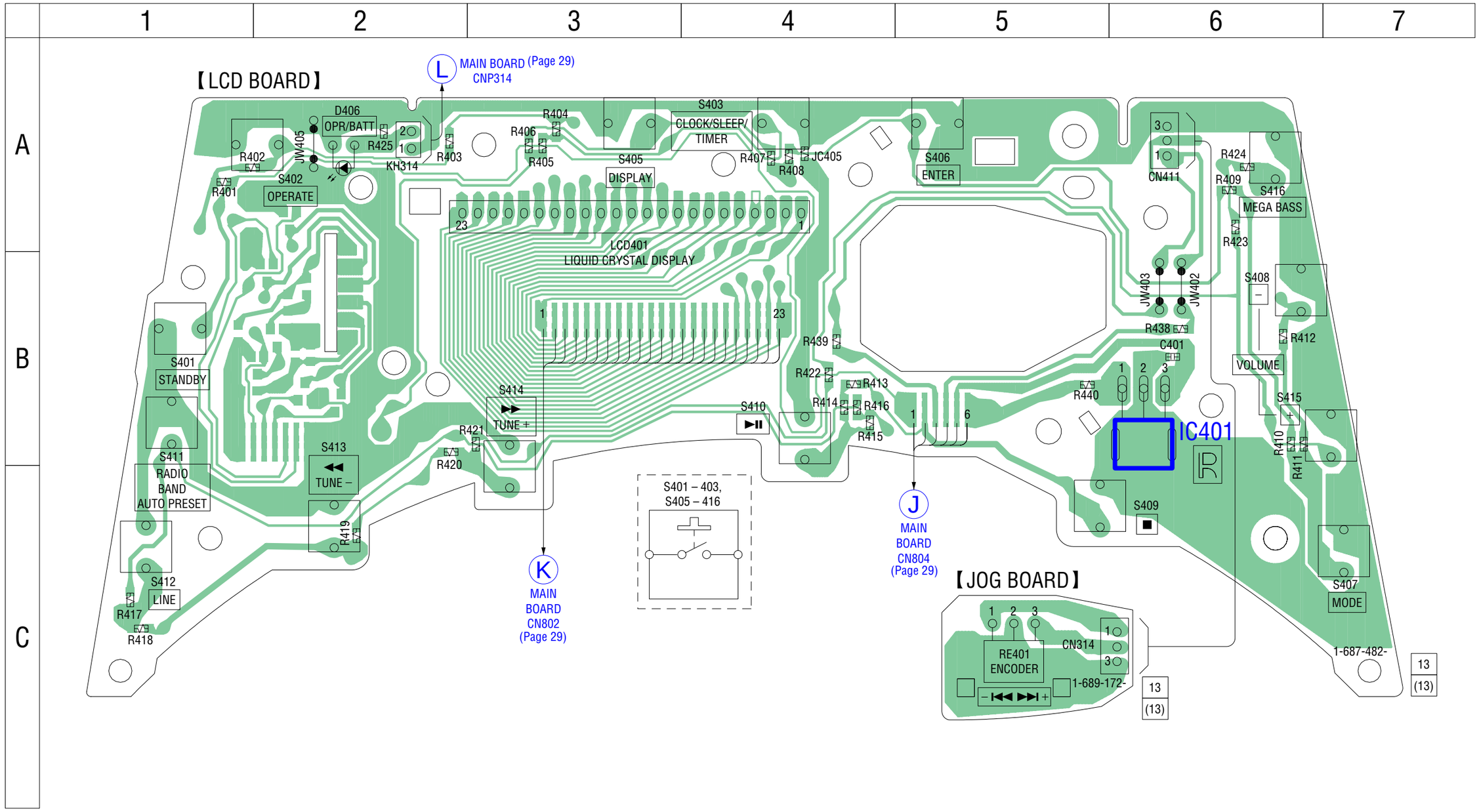
6-14. SCHEMATIC DIAGRAM – MAIN Section (2/2) –

• See page 36 for Waveforms. • See page 39 for IC Pin Function Description.

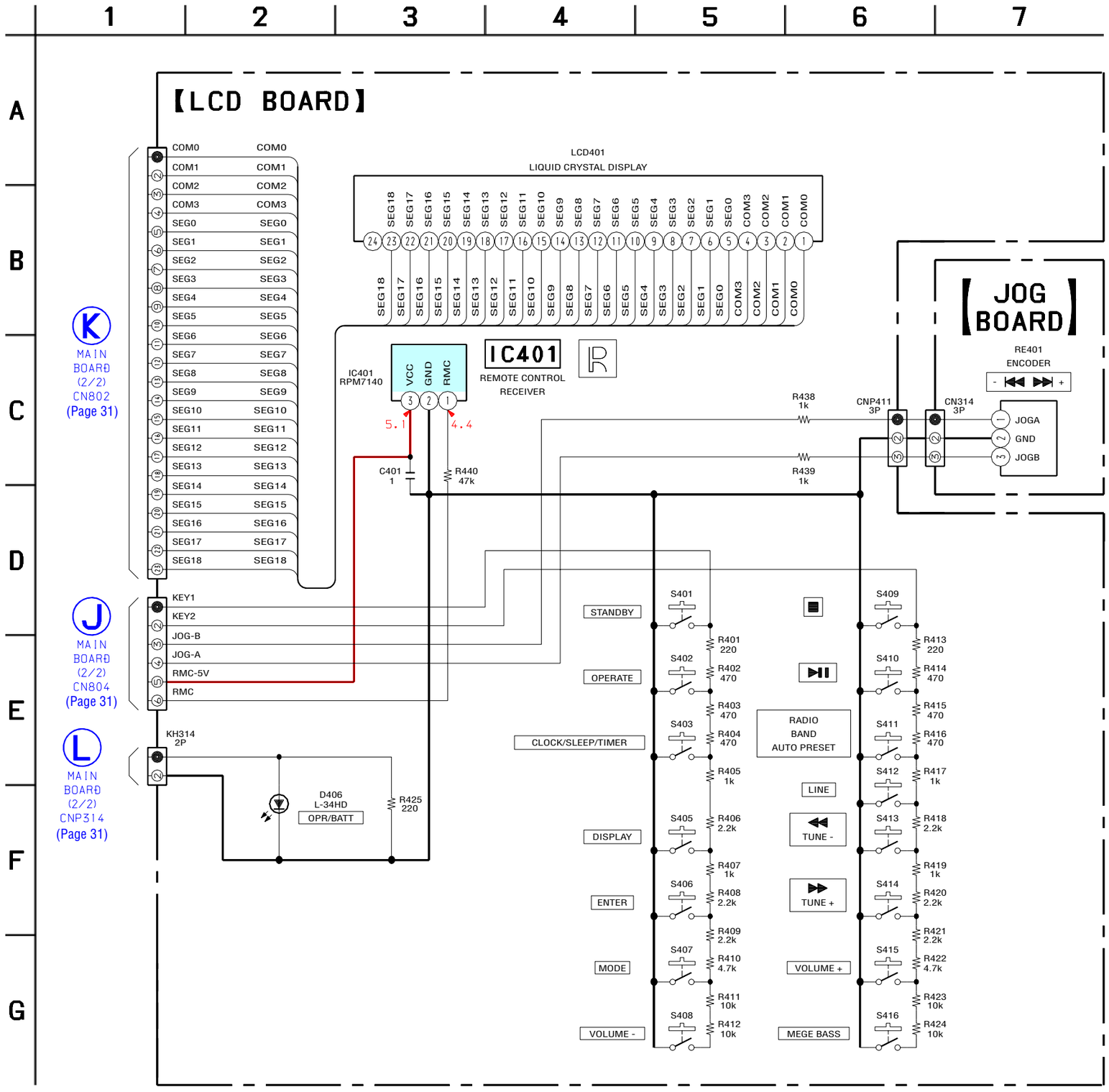


- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : TUNER ⟨⟨ ⟩⟩ : TAPE PLAY
  ( ) : CD PLAY { } : REC

6-15. PRINTED WIRING BOARDS – PANEL Section – • See page 23 for Circuit Boards Location. **:Uses unleaded solder.**

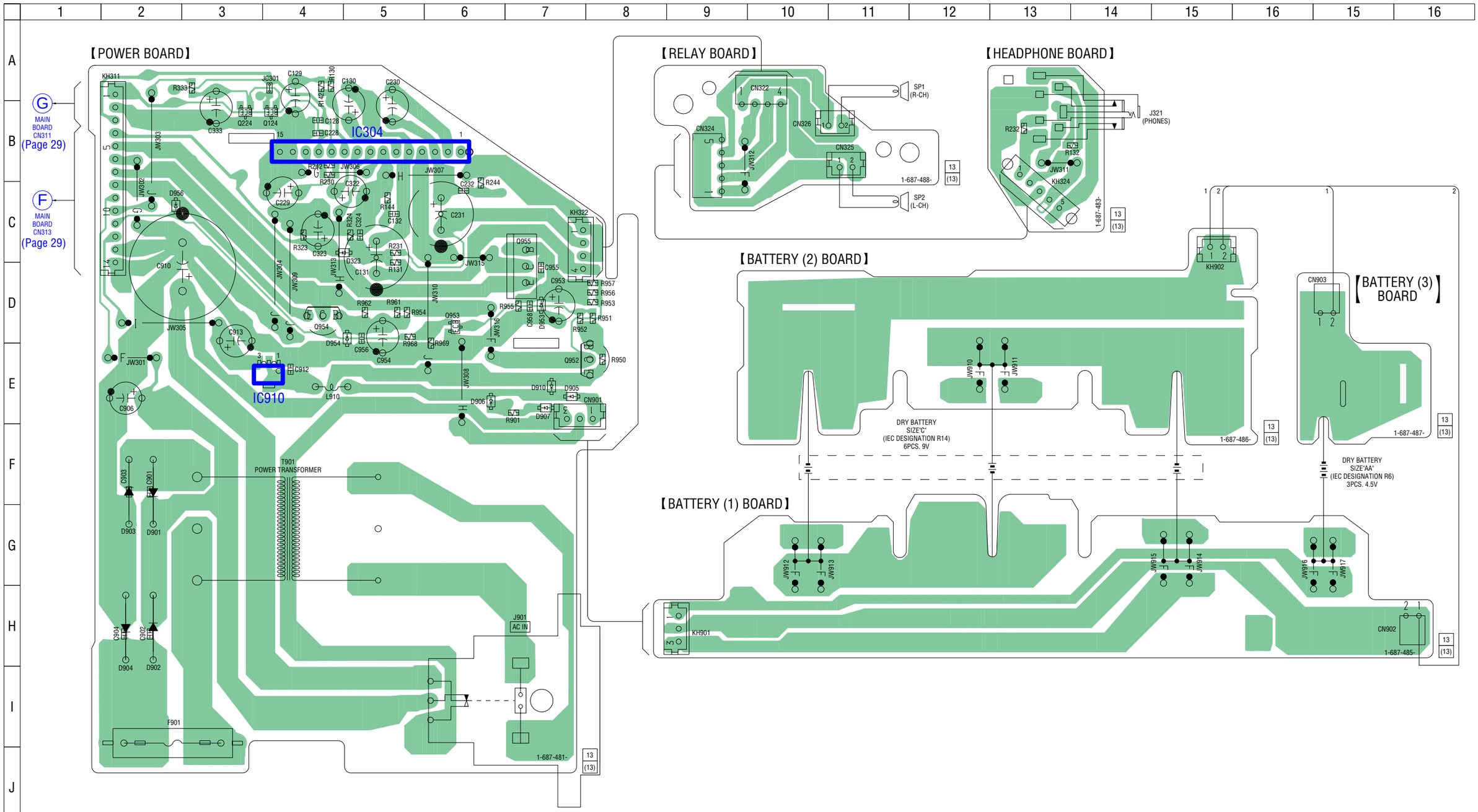


6-16. SCHEMATIC DIAGRAM – PANEL Section –



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : TUNER

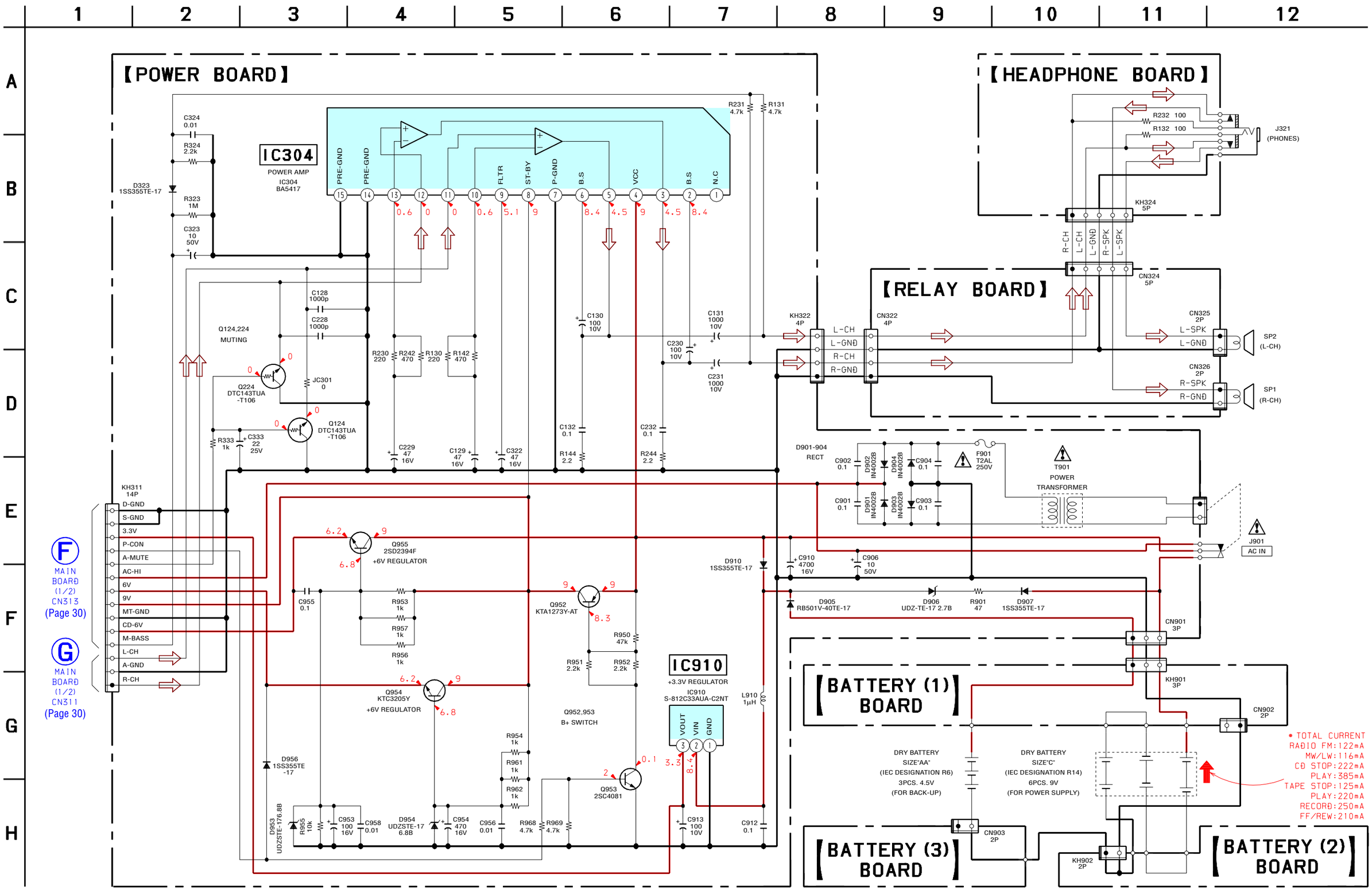
6-17. PRINTED WIRING BOARDS – POWER Section – • See page 23 for Circuit Boards Location. :Uses unleaded solder.



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D323	C-5	D956	C-2
D901	F-2		
D902	H-2	IC304	B-5
D903	F-2	IC910	E-4
D904	H-2		
D905	E-7	Q124	B-4
D906	E-6	Q224	B-3
D907	E-7	Q952	E-8
D910	E-7	Q953	D-6
D953	D-7	Q954	D-4
D954	D-5	Q955	D-7

6-18. SCHEMATIC DIAGRAM – POWER Section –



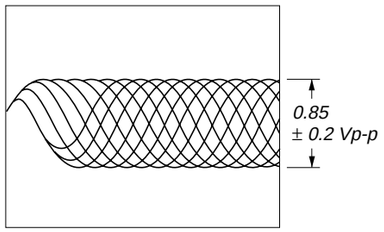
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : TUNER

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

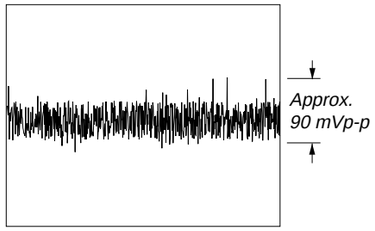
• Waveforms

– CD Board –

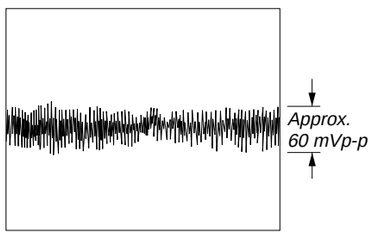
① IC701 ④ (RF) (CD Play mode)



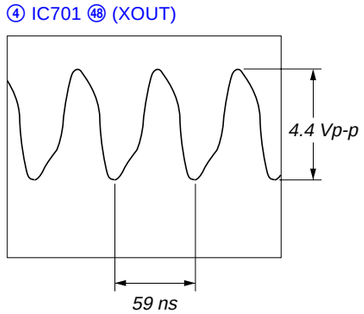
② IC701 ⑬ (FE) (CD Play mode)



③ IC701 ⑮ (TE) (CD Play mode)

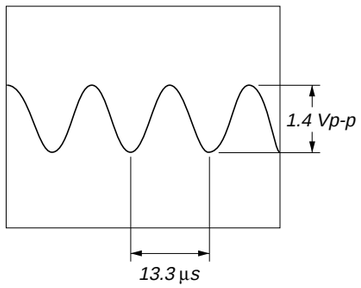


④ IC701 ㊽ (XOUT)



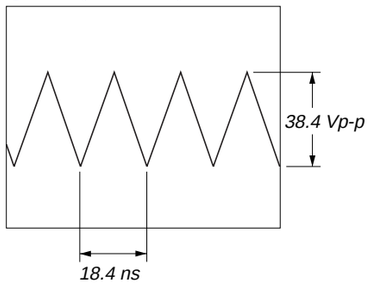
– TUNER Board –

⑪ IC2 ⑳ (XOUT)



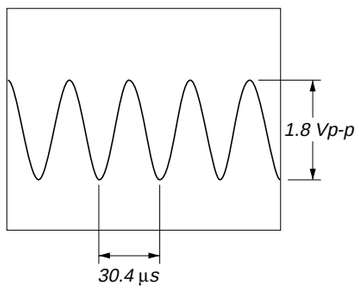
– PRE Board –

㉑ T301 (REC mode)

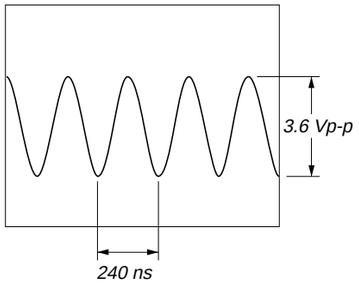


– MAIN Board –

㉛ IC801 ㉑ (XT2)



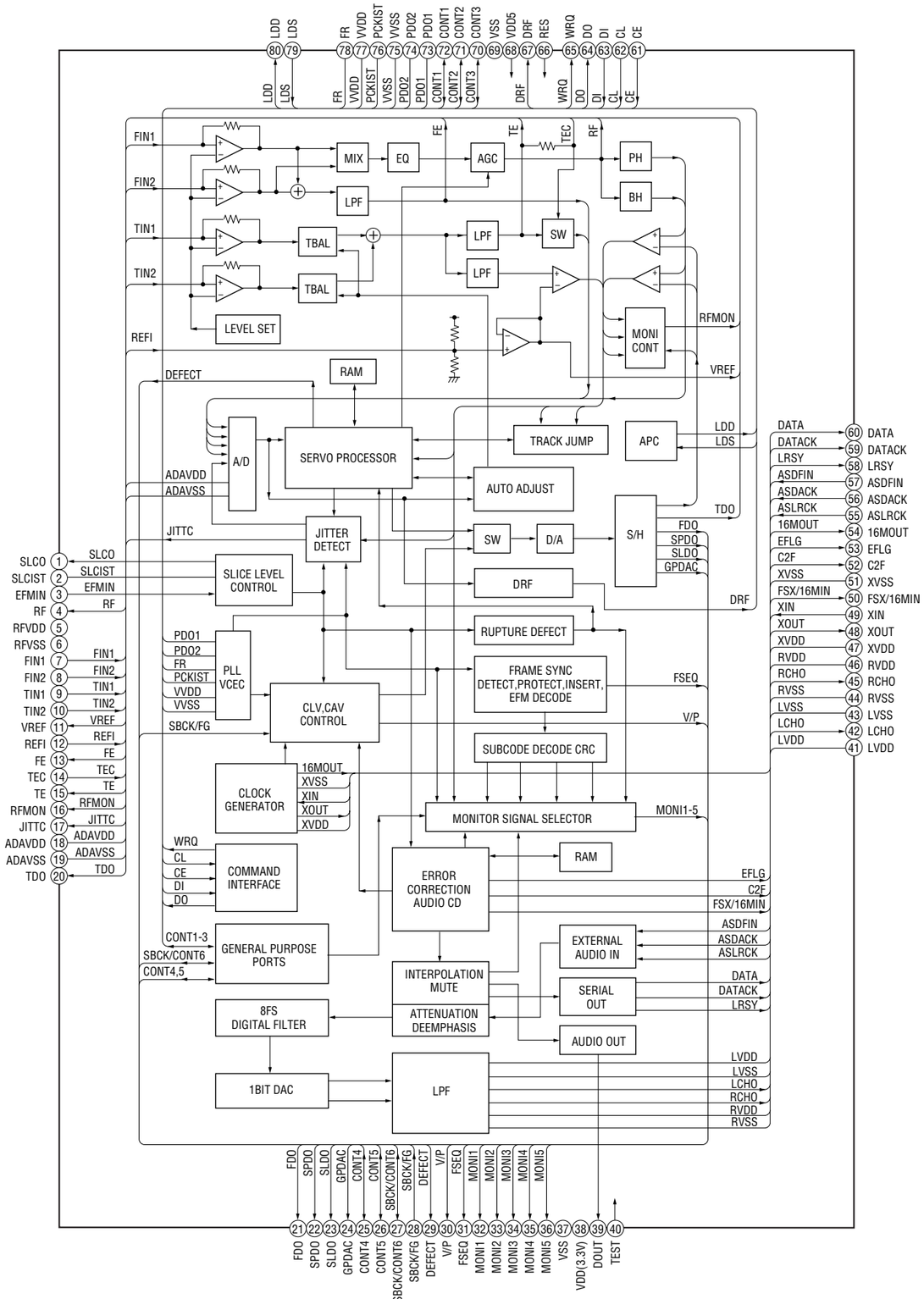
㉜ IC801 ㉕ (X2)



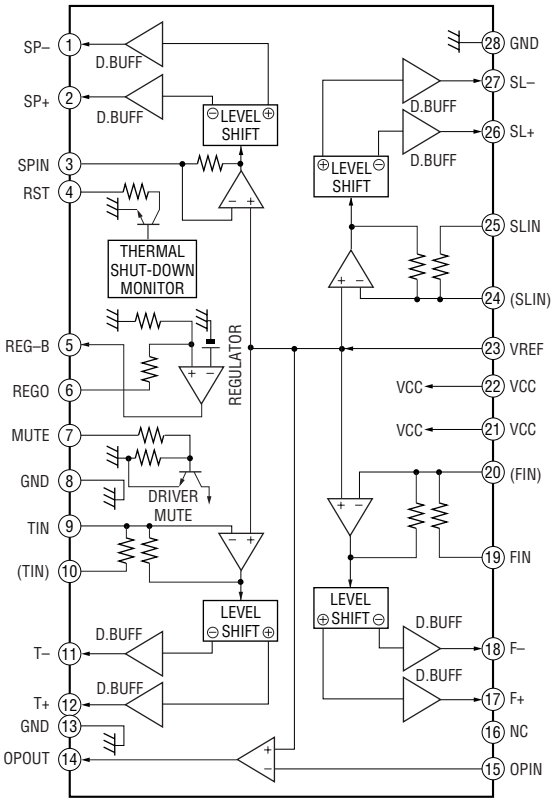
• IC Block Diagrams

– CD Board –

IC701 LC78646E-E

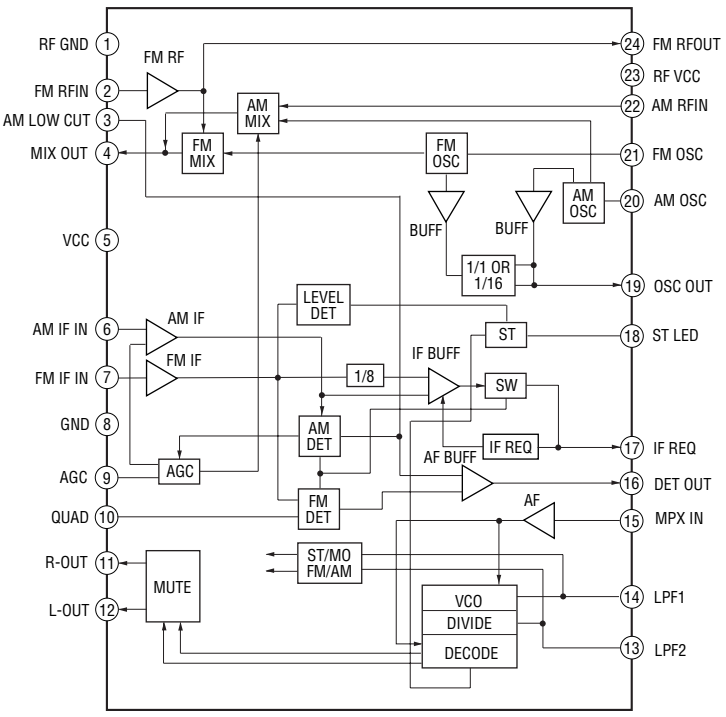


IC702 BA5826FP-E2

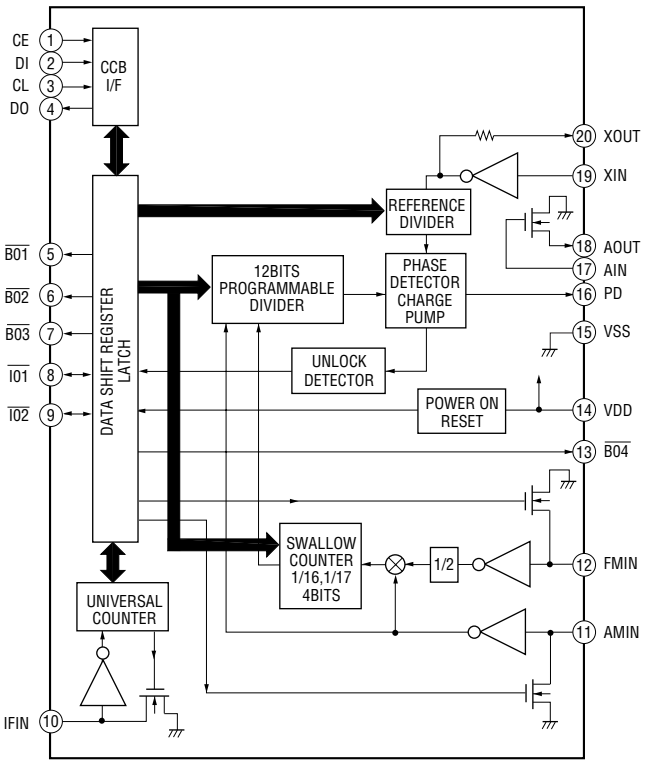


– TUNER Board –

IC1 TA2149BN

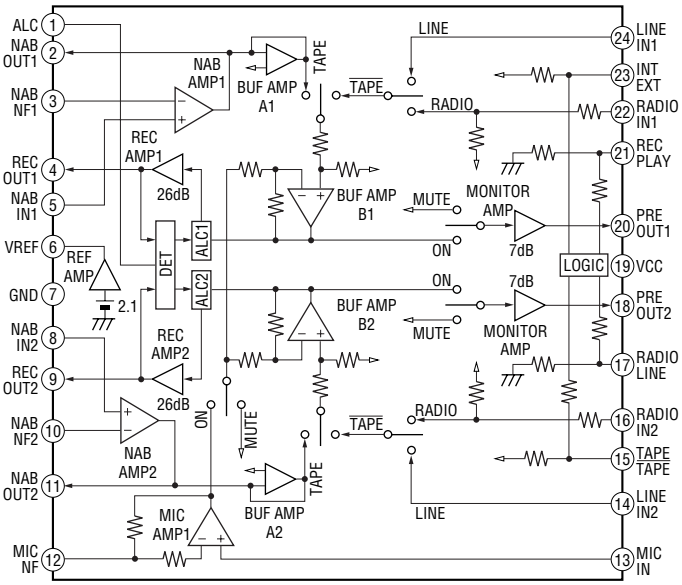


IC2 LC72137M-TLM-E



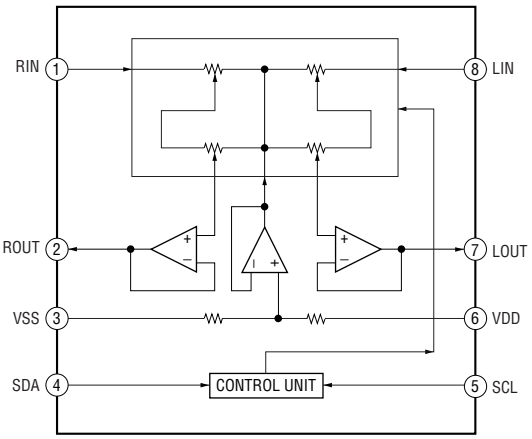
– PRE Board –

IC301 TA2068N



– MAIN Board –

IC302 PT2257-S



- **IC Pin Function Description**

MAIN BOARD IC801 μPD789478GC-A04-8BT (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1, 2	NC	—	Not used
3 to 5	VLC2 to VLC0	—	Terminal for doubler circuit capacitor connection to develop liquid crystal display drive voltage
6 to 9	COM0 to COM3	O	Common drive signal output to the liquid crystal display
10 to 28	SEG0 to SEG18	O	Segment drive signal output to the liquid crystal display
29	REC	I	Recording/playback detection signal input terminal "L": playback mode, "H": recording mode
30	BL-RED	O	LCD back light (red) on/off control signal output terminal "H": Red LED on Not used
31	BL-ORG	O	LCD back light (orange) on/off control signal output terminal "H": Orange LED on Not used
32	BL-GRN	O	LCD back light (green) on/off control signal output terminal "H": Green LED on Not used
33	BL-BLUE	O	LCD back light (blue) on/off control signal output terminal "H": Blue LED on Not used
34	LINE	O	Line function control signal output terminal "H": line on
35	CD	O	CD function control signal output terminal "H": CD on
36	TAPE	O	Tape function control signal output terminal "H": tape on
37	ISS2	O	ISS 2 on/off control signal output terminal "H": ISS 2 on
38	AVDD	—	Power supply terminal (+3.3V)
39	$\overline{\text{AC-CHK}}$	I	AC voltage detection signal input terminal "L": AC detected
40	CD DOOR	I	CD lid open/close detection switch input terminal "L": CD lid is closed, "H": CD lid is opened
41	6V-CHK	I	Power supply voltage (+6V) monitor input terminal
42	3V-CHK	I	Power supply voltage (+3V) monitor input terminal
43	9V-CHK	I	Power supply voltage (+9V) monitor input terminal Not used
44, 45	KEY2, KEY1	I	Front panel key input terminal (A/D input)
46	MODE CHK	I	Model destination setting terminal
47	AGND	—	Ground terminal
48	RMC	I	Remote control signal input from the remote control receiver
49	$\overline{\text{TC-PLAY}}$	I	Tape play detection switch input terminal "L": tape play mode
50	WP/INI	I/O	Interrupt status input terminal Output terminal for wake up/Initial reset signal reading
51	JOG-A	I	Jog dial pulse input from the encoder
52	C-WRQ	I	Interruption detection signal input from the digital signal processor
53	C-DOUT	I	Serial data input from the digital signal processor
54	C-DIN	O	Serial data output to the digital signal processor
55	C-CLK	O	Serial data transfer clock signal output to the digital signal processor
56	R-COUNT	I	PLL serial count data input from the FM/AM PLL
57	R-DATA	O	PLL serial data output to the FM/AM PLL
58	R-CLK	O	PLL serial data transfer clock signal output to the FM/AM PLL
59	R-LAT	O	PLL chip enable signal output to the FM/AM PLL
60	R-MUTE	O	Tuner muting on/off control signal output to the FM/AM PLL "H": muting on
61	C-DRF	I	Focus on/off detection signal input from the digital signal processor
62	C-CE	O	Chip enable signal output to the digital signal processor
63	C-FSEQ	I	Synchronizing signal detection signal input from the digital signal processor
64	C-XRT	O	System reset signal output to the digital signal processor "L": reset
65	P-CON	O	Power on/off control signal output terminal "L": standby mode, "H": power on
66	A-MUTE	O	Audio muting on/off control signal output terminal "H": muting on
67	JOG-B	I	Jog dial pulse input from the encoder
68	M-BASS	O	Megabass on/off control signal output terminal "L": megabass on
69	IC0	I	Not used

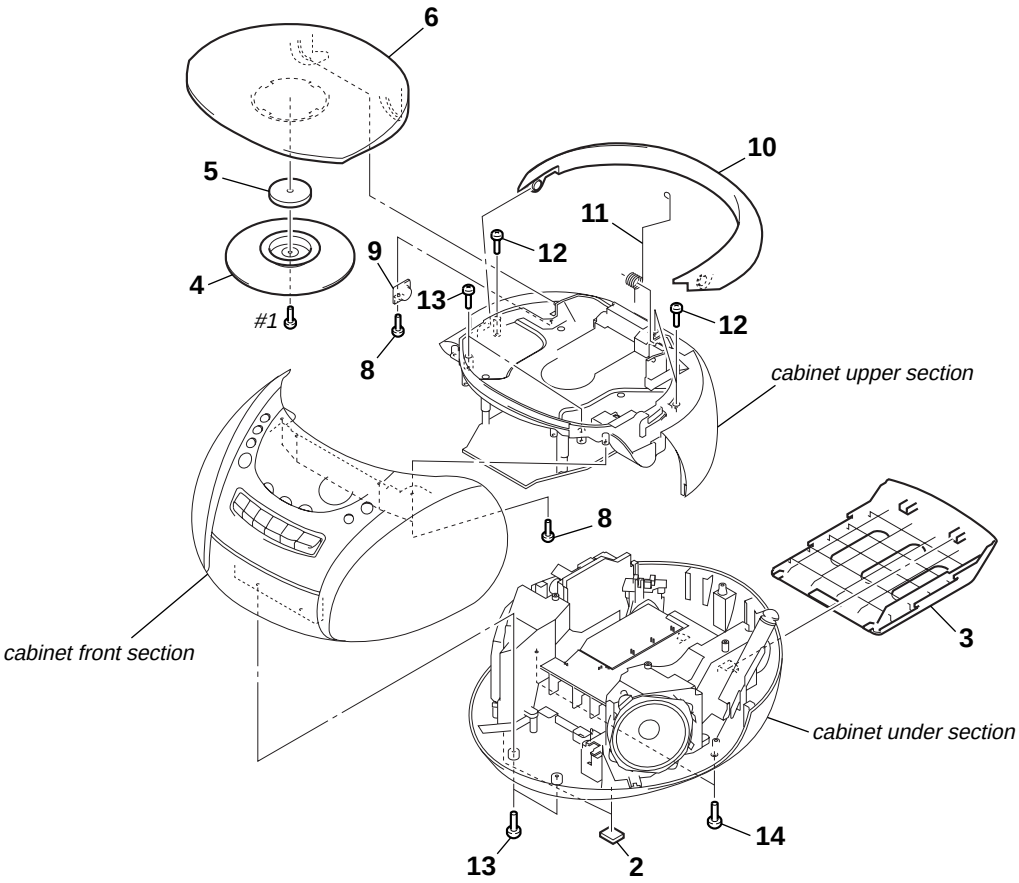
Pin No.	Pin Name	I/O	Description
70	XT1	I	Sub system clock input terminal (32.768 kHz)
71	XT2	O	Sub system clock output terminal (32.768 kHz)
72	VDD	—	Power supply terminal (+3.3V)
73	VSS	—	Ground terminal
74	X1	I	Main system clock input terminal (4.19 MHz)
75	X2	O	Main system clock output terminal (4.19 MHz)
76	$\overline{\text{RST}}$	I	System reset signal input "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
77	V-CLK	O	Serial data transfer clock signal output to the electrical volume
78	V-DATA	O	Serial data output to the electrical volume
79	BL-SLEEP	O	LCD back light sleep control signal output terminal High impedance: LCD back light sleep Not used
80	ISS1	O	ISS 1 on/off control signal output "H": ISS 1 on

SECTION 7
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Accessories are given in the last of the electrical parts list.
- Abbreviation
  EE : East European model
  IT : Italian model

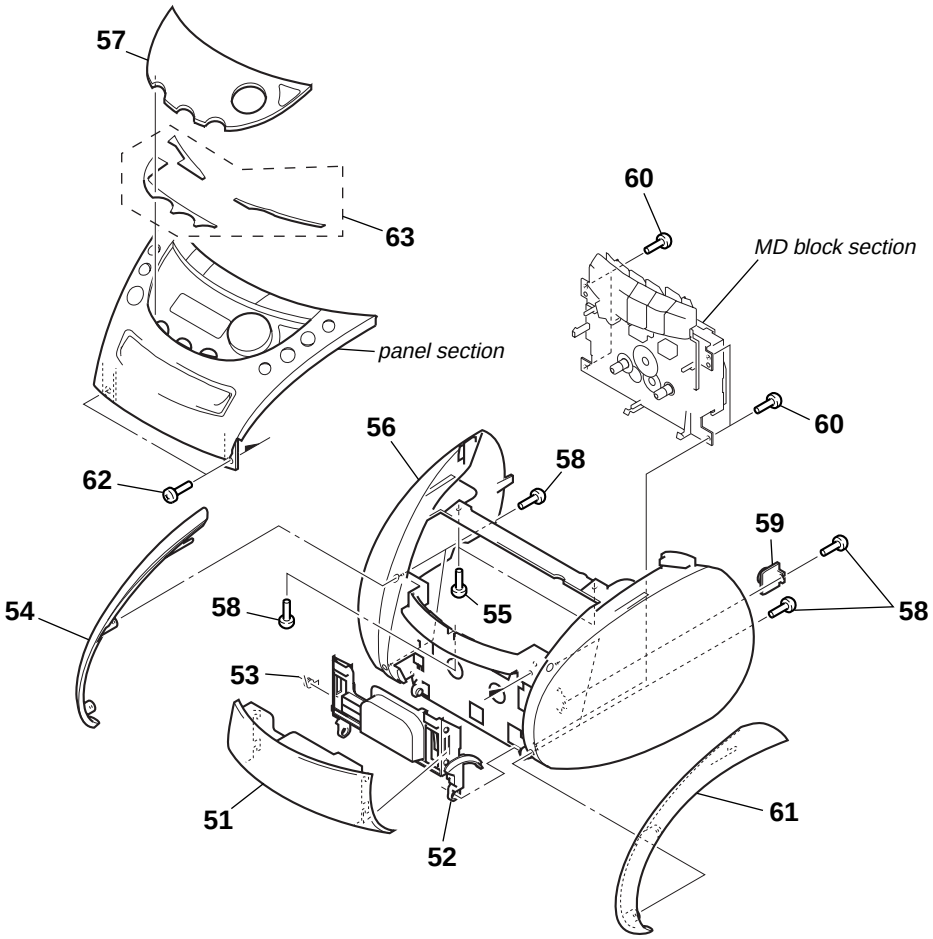
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. OVERALL SECTION



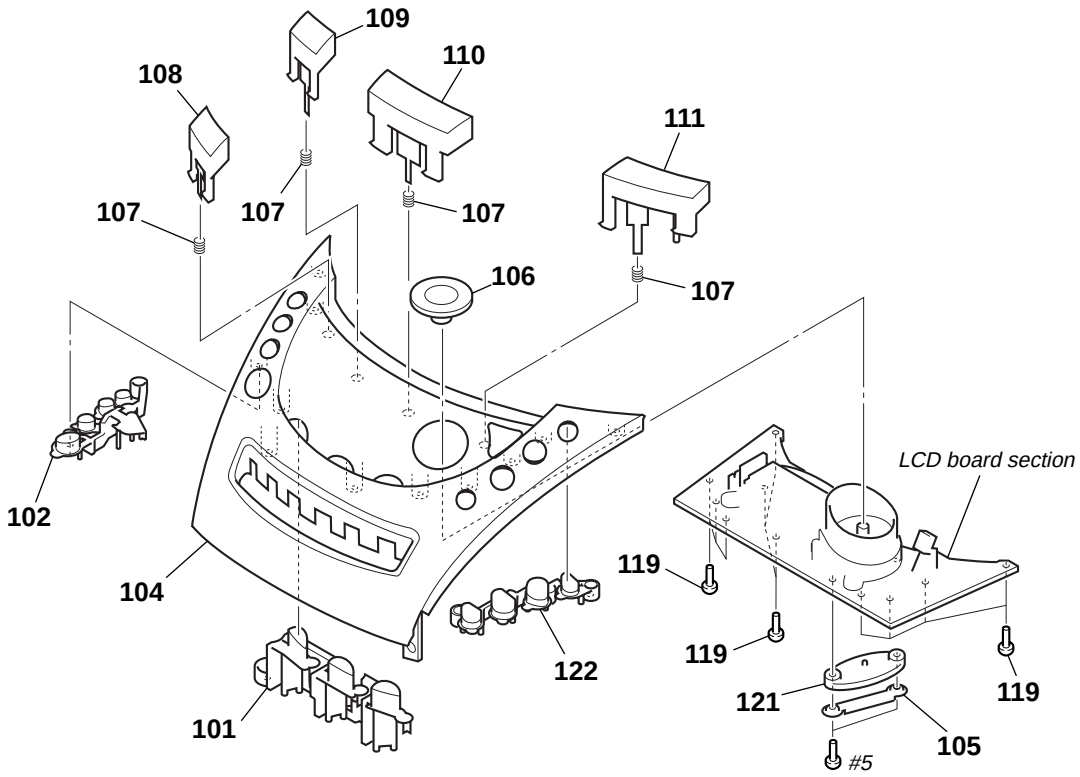
Ref. No.	Part No.	Description	Remark
2	3-040-916-01	FOOT (FRONT), RUBBER	
3	3-263-859-41	LID, BATTERY CASE (SILVER)	
3	3-263-859-51	LID, BATTERY CASE (BLUE)	
4	3-019-395-01	PLATE, CHUCKING	
5	1-452-899-11	MAGNET	
6	3-263-834-31	LID, CD (SILVER)	
6	3-263-834-41	LID, CD (BLUE)	
8	4-951-620-01	SCREW (2.6X8), +BVTP	
9	3-047-468-11	DAMPER	
10	3-247-652-31	HANDLE	
11	3-250-726-01	SPRING (CD)	
12	4-951-620-81	SCREW (2.6)	
13	4-951-620-31	SCREW (2.6), +BVTP	
14	4-951-620-41	SCREW (2.6), +BVTP	
#1	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	

7-2. CABINET FRONT SECTION



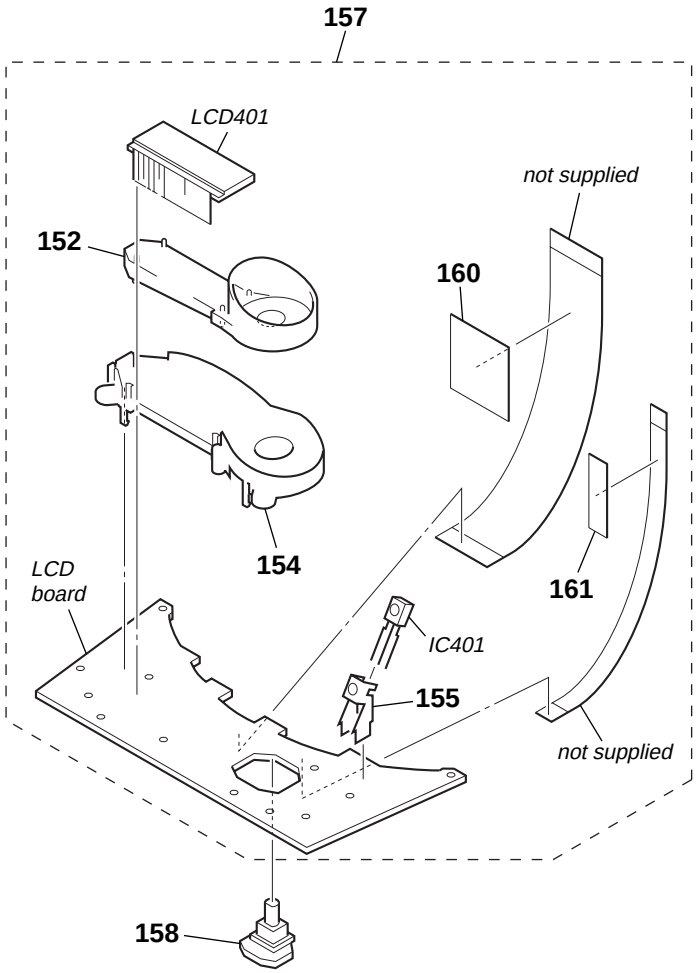
Ref. No.	Part No.	Description	Remark
51	3-263-837-51	LID, CASSETTE (SILVER)	
51	3-263-837-61	LID, CASSETTE (BLUE)	
52	3-247-667-11	HOLDER, CASSETTE	
53	3-250-733-01	SPRING (CASSETTE)	
54	3-247-653-31	PLATE (L), ORNAMENTAL	
55	4-951-620-81	SCREW (2.6)	
56	X-3383-049-1	CABINET FRONT SUB ASSY (S)	
57	3-263-775-41	WINDOW, LCD (SILVER)	
57	3-263-775-51	WINDOW, LCD (BLUE)	
58	4-951-620-01	SCREW (2.6X8), +BVTP	
59	3-047-468-01	DAMPER	
60	4-951-620-11	SCREW (2.6X10), +BVTP	
61	3-247-654-31	PLATE (R), ORNAMENTAL	
62	4-951-620-41	SCREW (2.6), +BVTP	
63	3-254-827-01	TAPE (LCD), DOUBLE STICK	

7-3. PANEL SECTION



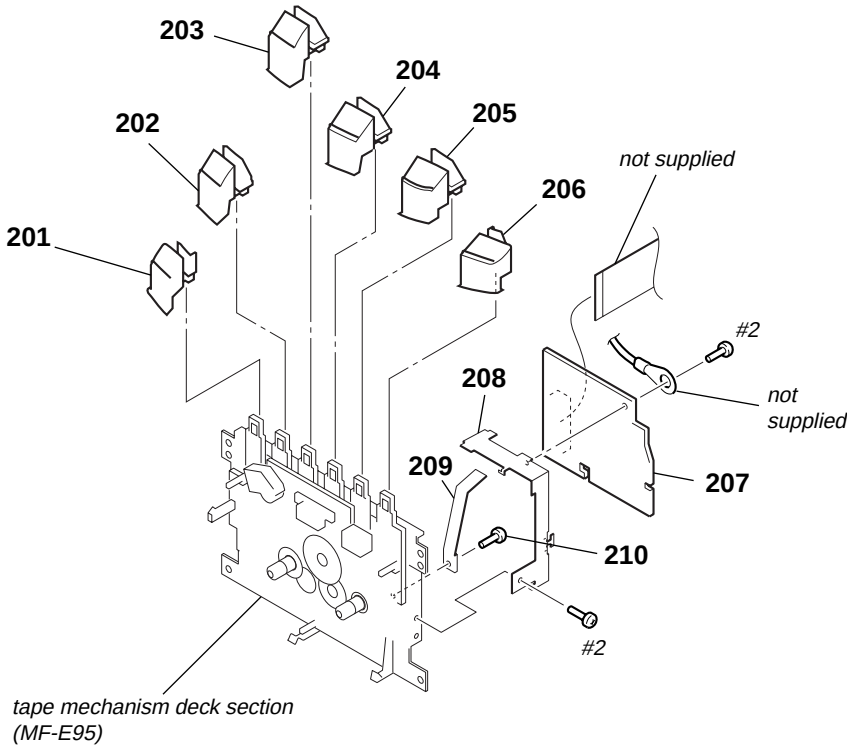
Ref. No.	Part No.	Description	Remark
101	3-247-656-11	BUTTON (CENTER) (DISPLAY. CLOCK./SLEEP/TIMER. ENTER)	
102	3-263-963-01	BUTTON (L) (LINE. BAND. STANDBY. OPERATE) (SILVER)	
102	3-263-963-11	BUTTON (L) (LINE. BAND. STANDBY. OPERATE) (BLUE)	
104	3-263-836-61	PANEL (SILVER)	
104	3-263-836-71	PANEL (BLUE)	
105	3-256-306-01	REINFORCEMENT (JOG)	
106	3-247-668-11	DIAL, JOG	
107	3-250-751-01	SPRING (CD BUTTON)	
108	3-250-750-12	BUTTON (CD) (REW) (TUNE -)	
109	3-250-749-12	BUTTON (CD) (FWD) (TUNE +)	
110	3-247-655-11	BUTTON (CD) (PLAY) (▶II)	
111	3-250-748-11	BUTTON (CD) (STOP) (■)	
119	4-951-620-01	SCREW (2.6X8), +BVTP	
121	3-250-753-01	HOLDER (JOG)	
122	3-263-853-41	BUTTON (R) (MODE. +. –. MEGA BASS) (SILVER)	
122	3-263-853-51	BUTTON (R) (MODE. +. –. MEGA BASS) (BLUE)	
#5	7-685-137-19	SCREW +P 2.6X14 TYPE2 NON-SLIT	

7-4. LCD BOARD SECTION



Ref. No.	Part No.	Description	Remark
152	3-247-675-01	PLATE, LIGHT GUIDE	
154	3-247-669-01	HOLDER, LCD	
155	3-250-762-01	HOLDER (REMOTE)	
* 157	A-4547-017-A	LCD BOARD, COMPLETE	
158	1-689-172-12	JOG BOARD	
160	3-254-939-01	SHEET (23 PIN FFC), PROTECTION	
161	3-254-940-01	SHEET (6 PIN FFC), PROTECTION	
IC401	6-600-108-01	IC RPM7140 (REMOTE CONTROL RECEIVER)	
LCD401	1-805-533-11	DISPLAY PANEL, LIQUID CRYSTAL	

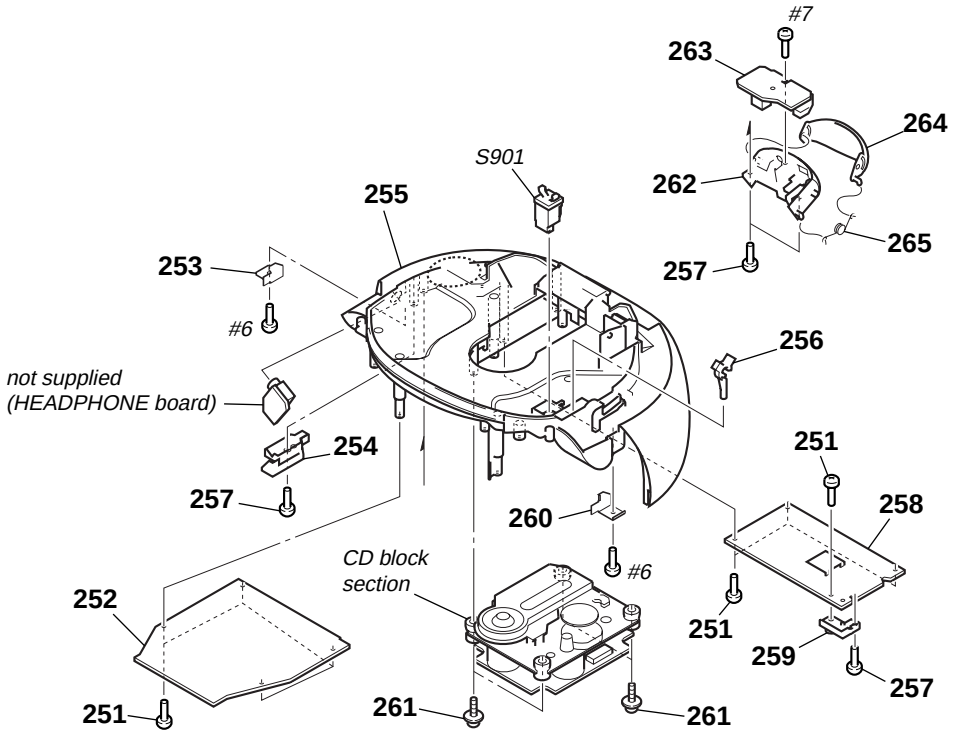
7-5. MD BLOCK SECTION



Ref. No.	Part No.	Description	Remark
201	3-247-659-11	BUTTON (MD) (PASUE) (❚❚)	
202	3-247-663-11	BUTTON (MD) (STOP/EJECT) (■ ⏏)	
203	3-247-662-11	BUTTON (MD) (REW) (◀◀)	
204	3-247-658-11	BUTTON (MD) (FWD) (▶▶)	
205	3-247-660-11	BUTTON (MD) (PLAY) (◀)	
206	3-247-661-11	BUTTON (MD) (REC) (●)	

Ref. No.	Part No.	Description	Remark
* 207	A-3683-864-A	PRE BOARD, COMPLETE	
208	3-237-719-02	CHASSIS, TC	
209	3-237-718-01	LEVER REC	
210	3-030-741-01	SCREW (M2X2)	
#2	7-685-851-04	SCREW +BVTT 2X4 (S)	

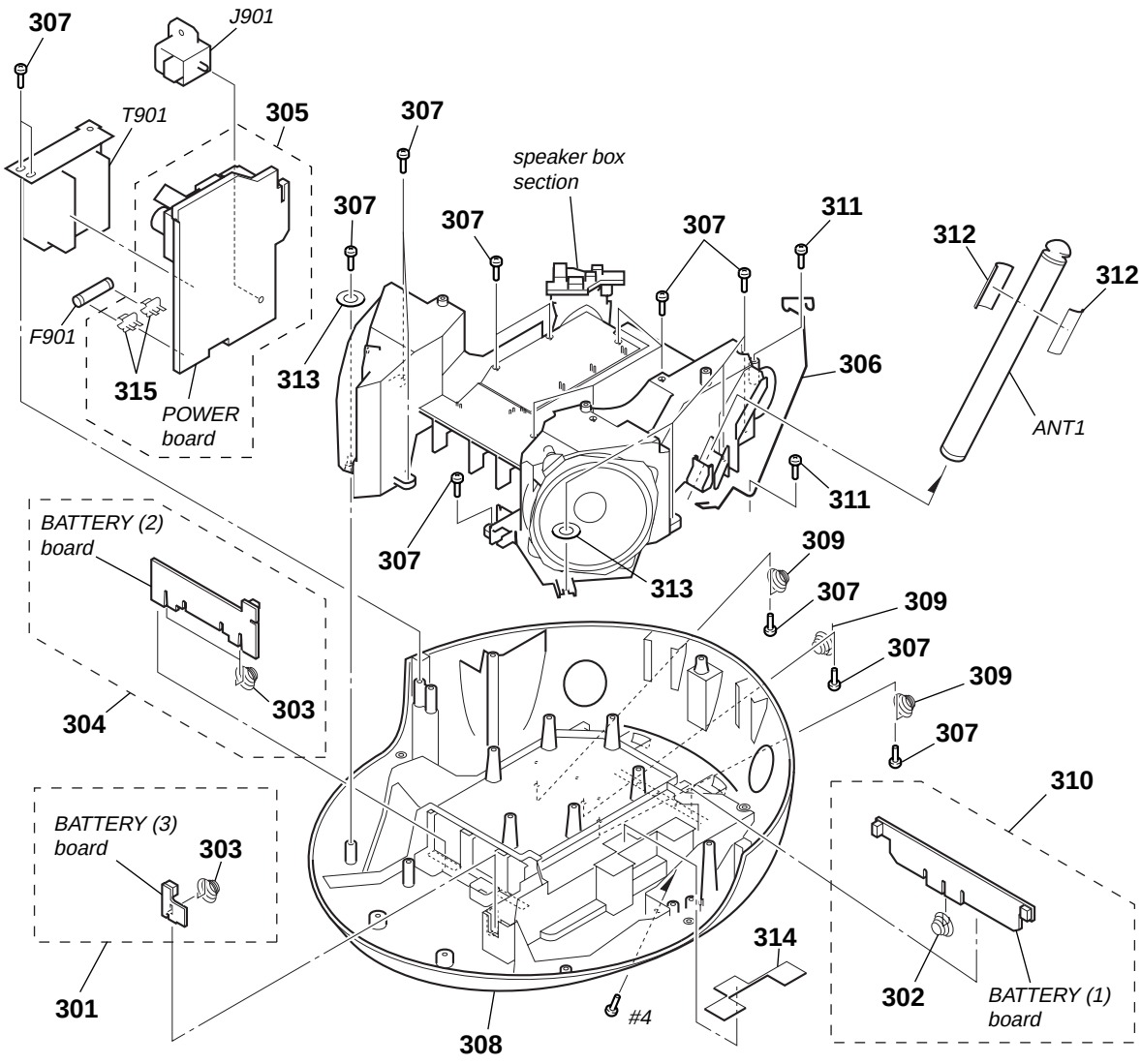
7-6. CABINET UPPER SECTION



Ref. No.	Part No.	Description	Remark
251	4-951-620-01	SCREW (2.6X8), +BVTP	
* 252	A-4547-020-A	MAIN BOARD, COMPLETE	
253	3-256-305-01	HOLDER (L), HANDLE	
254	3-250-722-01	BRACKET (H/P)	
255	3-263-846-61	CABINET (UPPER) (SILVER)	
255	3-263-846-71	CABINET (UPPER) (BLUE)	
256	3-232-770-01	STOPPER (CD)	
257	4-951-620-11	SCREW (2.6X10), +BVTP	
* 258	A-3683-401-A	TUNER BOARD, COMPLETE	
259	3-250-723-01	HOLDER (TUNER PC BOARD)	
260	3-256-304-01	HOLDER (R), HANDLE	

Ref. No.	Part No.	Description	Remark
261	3-921-725-11	SCREW (2.6X10), +PWH	
262	3-250-766-01	CHASSIS (DIGITAL OUT) (BLUE)	
262	3-250-766-21	CHASSIS (DIGITAL OUT) (SILVER)	
* 263	A-3683-402-A	D-OUT BOARD, COMPLETE	
264	3-250-765-01	COVER (DIGITAL OUT) (BLUE)	
264	3-250-765-21	COVER (DIGITAL OUT) (SILVER)	
265	3-250-767-01	SPRING (JACK)	
S901	1-692-960-11	SWITCH, PUSH (1 KEY) (CD LID OPEN/CLOSE)	
#6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	

7-7. CABINET UNDER SECTION

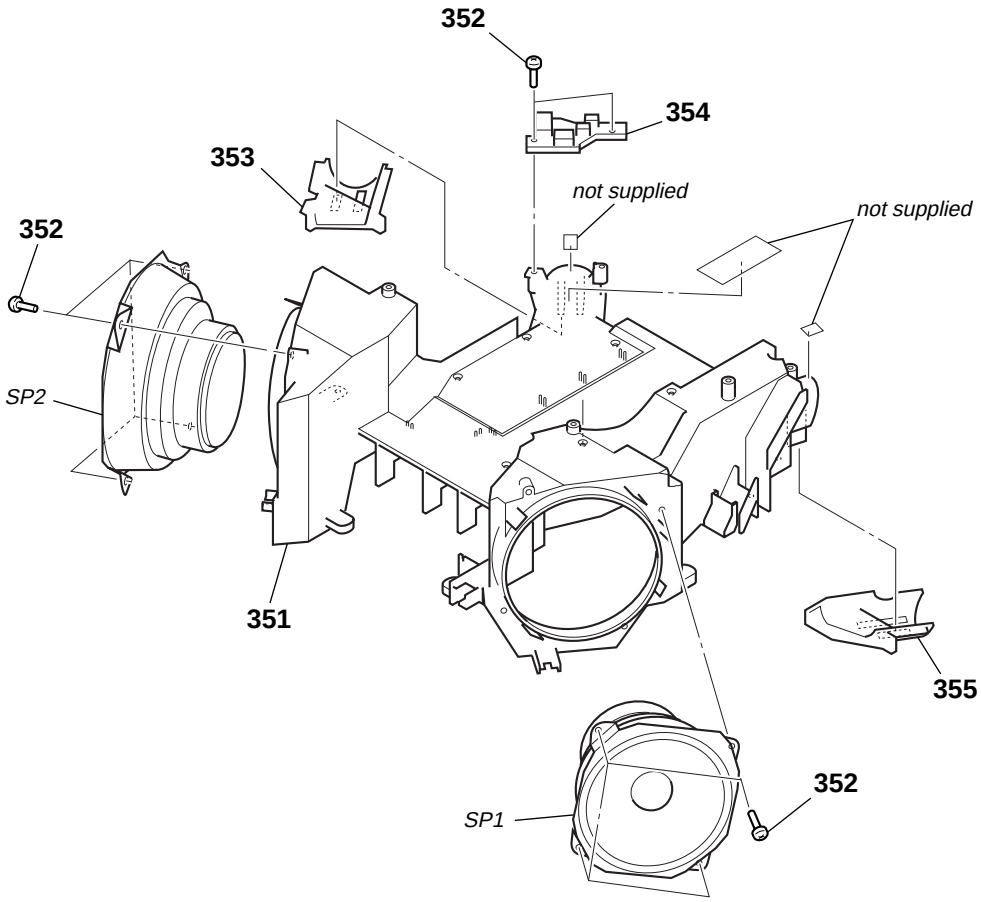


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 301	A-3663-823-A	BATTERY (3) BOARD, COMPLETE	
302	3-229-976-01	SPRING BATTERY (S) (-)	
303	3-229-975-01	SPRING BATTERY (-)	
* 304	A-3663-822-A	BATTERY (2) BOARD, COMPLETE	
* 305	A-3683-403-A	POWER BOARD, COMPLETE	
306	3-247-685-01	TERMINAL, ANTENNA	
307	4-951-620-11	SCREW (2.6X10), +BVTP	
308	3-263-888-11	CABINET (LOWER) (SILVER) (AEP, UK, IT)	
308	3-263-888-21	CABINET (LOWER) (BLUE) (AEP, UK, IT)	
308	3-263-888-31	CABINET (LOWER) (SILVER) (EE)	
308	3-263-888-41	CABINET (LOWER) (BLUE) (EE)	
309	3-252-540-01	SPRING (+. -), BATTERY	

Ref. No.	Part No.	Description	Remark
* 310	A-3663-821-A	BATTERY (1) BOARD, COMPLETE	
311	4-951-620-01	SCREW (2.6X8), +BVTP	
312	3-846-312-11	SPACER (E)	
313	3-241-386-01	SPACER (JOG)	
314	3-254-842-01	SHEET (SP BOX)	
315	1-533-233-31	FUSE HOLDER	
ANT1	1-754-282-11	ANTENNA, TELESCOPIC	
⚠F901	1-533-468-22	FUSE, GLASS TUBE (DIA. 5) (T2AL/250V)	
⚠J901	1-526-838-11	INLET, AC 2P (AC IN)	
⚠T901	1-439-713-11	TRANSFORMER, POWER	
#4	7-682-548-04	SCREW +B 3X8	

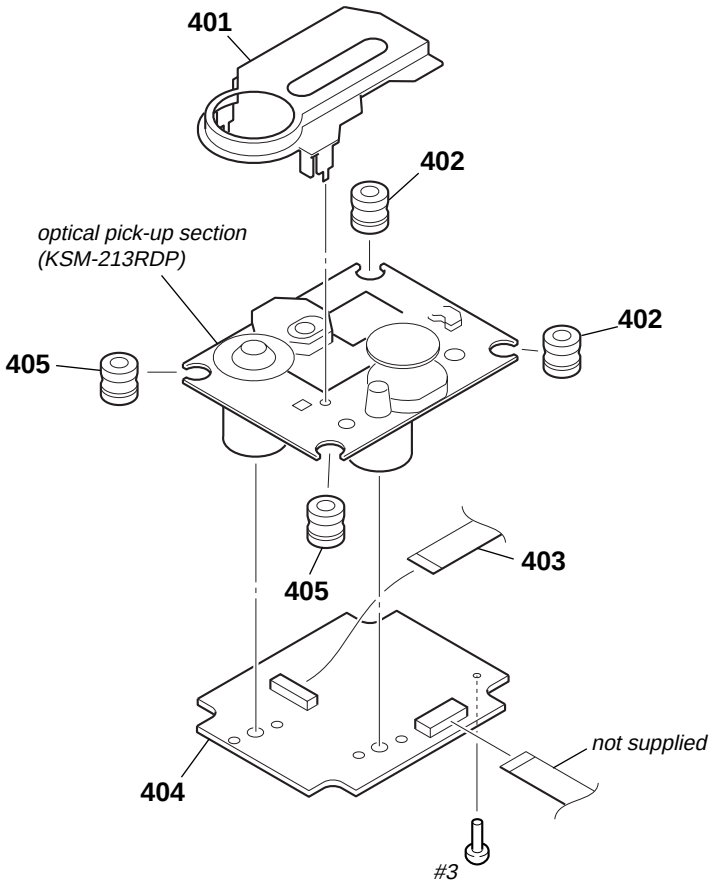
7-8. SPEAKER BOX SECTION



Ref. No.	Part No.	Description	Remark
351	3-247-672-01	BOX, SPEAKER	
352	4-951-620-01	SCREW (2.6X8), +BVTP	
353	3-250-729-01	COVER (L), DUCT	
* 354	A-3663-824-A	RELAY BOARD, COMPLETE	

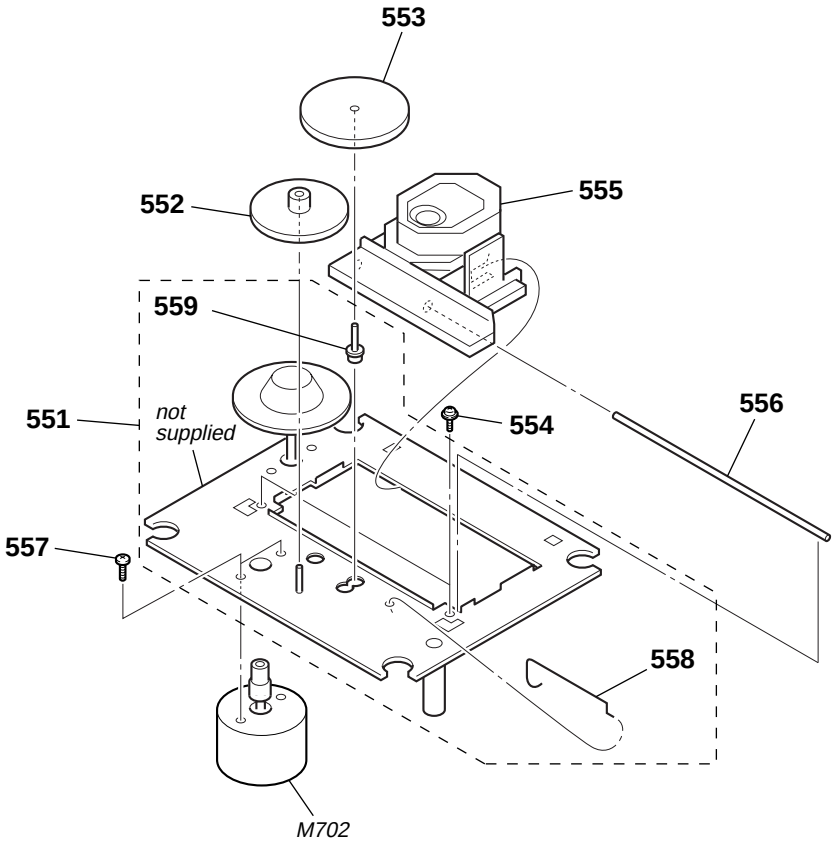
Ref. No.	Part No.	Description	Remark
355	3-250-730-01	COVER (R), DUCT	
SP1	1-825-474-11	SPEAKER (8cm) (R)	
SP2	1-825-474-11	SPEAKER (8cm) (L)	

7-9. CD BLOCK SECTION



Ref. No.	Part No.	Description	Remark
401	3-923-736-01	COVER, CD	
402	3-931-379-31	RUBBER, VIBRATION PROOF	
403	1-757-689-11	CABLE, FLEXIBLE FLAT (16 CORE)	
* 404	A-3347-785-A	CD BOARD, COMPLETE	
405	3-931-379-21	RUBBER, VIBRATION PROOF	
#3	7-685-853-04	SCREW +BVTT 2X6 (S)	

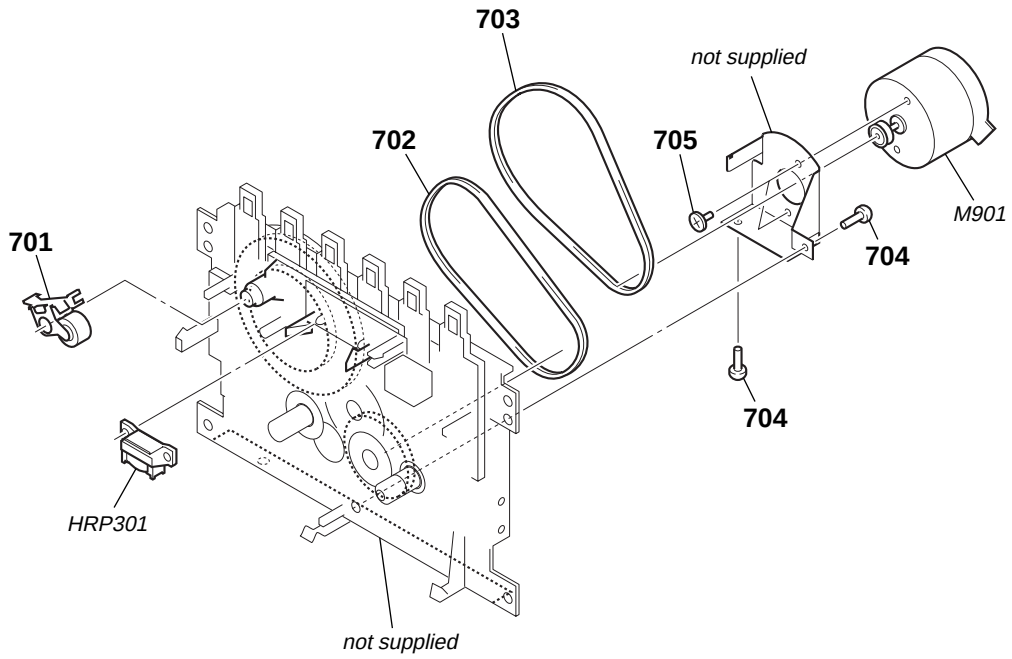
7-10. OPTICAL PICK-UP SECTION (KSM-213RDP)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
551	X-2162-707-2	CHASSIS ASSY (RDP) (RP), MOTOR (including M701) (SPINDLE)	
* 552	2-647-408-02	GEAR (B)	
* 553	2-169-065-01	GEAR (A)	
554	2-169-388-01	TAPPING (M2), +PWB	
⚠555	8-820-161-02	OPTICAL PICK-UP (KSS-213R/C2RP)	
556	2-626-908-01	SHAFT, SLED	
557	2-174-500-01	SCREW (M2X3)	
* 558	2-169-385-01	SPRING, SLED	
* 559	2-169-384-01	SHAFT (S), GEAR	
M702	X-2162-712-2	GEAR ASSY (R) (RP), MOTOR (SLED)	

7-11. TAPE MECHANISM DECK SECTION (MF-E95)



Ref. No.	Part No.	Description	Remark
701	3-244-086-01	ARM, PINCH ROLLER	
702	3-244-079-01	BELT (B), SUB	
703	3-244-080-01	BELT (B), MAIN	
704	3-244-084-01	+ SCERW PAN M2.6X4.5	
705	3-244-083-01	+ SCREW BIND DT M2X6	
HRP301	3-244-085-01	HEAD, R/P (RECORD/PLAY BACK)	
M901	3-244-082-01	PULLEY (MOTOR) (CAPSTAN/REEL)	

SECTION 8
ELECTRICAL PARTS LIST

BATTERY (1) **BATTERY (2)** **BATTERY (3)** **CD**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

- Abbreviation
  EE : East European model
  IT : Italian model

Ref. No.	Part No.	Description			Remark
*	A-3663-821-A	BATTERY (1) BOARD, COMPLETE			
		**********			
	3-229-976-01	SPRING BATTERY (S) (–)			
		< CONNECTOR >			
* CN902	1-815-550-11	PIN, CONNECTOR (PWB) 2P			
**********					
*	A-3663-822-A	BATTERY (2) BOARD, COMPLETE			
		**********			
	3-229-975-01	SPRING BATTERY (–)			
**********					
*	A-3663-823-A	BATTERY (3) BOARD, COMPLETE			
		**********			
	3-229-975-01	SPRING BATTERY (–)			
		< CONNECTOR >			
* CN903	1-815-550-11	PIN, CONNECTOR (PWB) 2P			
**********					
*	A-3347-785-A	CD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C702	1-126-947-11	ELECT	47uF	20%	35V
C703	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C704	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C705	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C706	1-126-960-11	ELECT	1uF	20%	50V
C707	1-115-156-11	CERAMIC CHIP	1uF		10V
C708	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C709	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C711	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C716	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C717	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C718	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C719	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C720	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C721	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C722	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C723	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C724	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C725	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C726	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C727	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C728	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C729	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C730	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C731	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C732	1-104-665-11	ELECT	100uF	20%	25V
C733	1-104-665-11	ELECT	100uF	20%	25V
C734	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C735	1-126-916-11	ELECT	1000uF	20%	6.3V
C736	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C738	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C739	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C740	1-126-935-11	ELECT	470uF	20%	16V
C741	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C742	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C743	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C744	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C745	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C746	1-104-665-11	ELECT	100uF	20%	25V
C747	1-104-665-11	ELECT	100uF	20%	25V
C750	1-104-665-11	ELECT	100uF	20%	25V
C751	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C754	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C755	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CNP701	1-779-553-21	CONNECTOR, FFC (LIF (NON-ZIF)) 16P			
* CNP702	1-784-736-11	CONNECTOR, FFC 14P			
* CNP703	1-815-551-11	PIN, CONNECTOR (PWB) 3P			
		< FERRITE BEAD >			
FB701	1-469-701-21	FERRITE, EMI (SMD) (1608)			
FB702	1-414-445-11	FERRITE, EMI (SMD) (1608)			
		< IC >			
IC701	6-701-796-01	IC LC78646E-E			
IC702	6-701-787-11	IC BA5826FP-E2			
		< SHORT >			
JC701	1-216-864-11	SHORT CHIP	0		

CD | D-OUT | HEADPHONE | JOG | LCD

Ref. No.	Part No.	Description			Remark
JC702	1-216-864-11	SHORT CHIP	0		
JC703	1-216-864-11	SHORT CHIP	0		
		< COIL >			
L706	1-414-445-11	FERRITE, EMI (SMD) (1608)			
		< TRANSISTOR >			
Q701	8-729-054-57	TRANSISTOR	KTN2907AS-RTK		
		< RESISTOR >			
R701	1-216-841-11	METAL CHIP	47K	5%	1/10W
R702	1-216-833-11	METAL CHIP	10K	5%	1/10W
R703	1-216-833-11	METAL CHIP	10K	5%	1/10W
R704	1-216-833-11	METAL CHIP	10K	5%	1/10W
R705	1-216-833-11	METAL CHIP	10K	5%	1/10W
R706	1-216-841-11	METAL CHIP	47K	5%	1/10W
R707	1-216-797-11	METAL CHIP	10	5%	1/10W
R708	1-216-833-11	METAL CHIP	10K	5%	1/10W
R709	1-216-837-11	METAL CHIP	22K	5%	1/10W
R710	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R711	1-216-809-11	METAL CHIP	100	5%	1/10W
R712	1-216-809-11	METAL CHIP	100	5%	1/10W
R713	1-216-813-11	METAL CHIP	220	5%	1/10W
R714	1-216-809-11	METAL CHIP	100	5%	1/10W
R715	1-216-809-11	METAL CHIP	100	5%	1/10W
R716	1-216-821-11	METAL CHIP	1K	5%	1/10W
R717	1-216-821-11	METAL CHIP	1K	5%	1/10W
R718	1-216-821-11	METAL CHIP	1K	5%	1/10W
R719	1-216-809-11	METAL CHIP	100	5%	1/10W
R720	1-216-809-11	METAL CHIP	100	5%	1/10W
R721	1-216-821-11	METAL CHIP	1K	5%	1/10W
R722	1-216-809-11	METAL CHIP	100	5%	1/10W
R723	1-216-809-11	METAL CHIP	100	5%	1/10W
R724	1-216-841-11	METAL CHIP	47K	5%	1/10W
R725	1-216-813-11	METAL CHIP	220	5%	1/10W
R726	1-216-813-11	METAL CHIP	220	5%	1/10W
R727	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R728	1-216-833-11	METAL CHIP	10K	5%	1/10W
R729	1-216-813-11	METAL CHIP	220	5%	1/10W
R730	1-216-821-11	METAL CHIP	1K	5%	1/10W
R731	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R732	1-216-857-11	METAL CHIP	1M	5%	1/10W
R733	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R734	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R735	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R736	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R737	1-216-817-11	METAL CHIP	470	5%	1/10W
R738	1-216-817-11	METAL CHIP	470	5%	1/10W
R739	1-216-809-11	METAL CHIP	100	5%	1/10W
R741	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R742	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R743	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R744	1-216-845-11	METAL CHIP	100K	5%	1/10W
R746	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R747	1-216-821-11	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S701	1-571-936-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X701	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
*	A-3683-402-A	D-OUT BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C370	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C371	1-115-156-11	CERAMIC CHIP	1uF		10V
		< FERRITE BEAD >			
FB301	1-414-445-11	FERRITE, EMI (SMD) (1608)			
		< JACK >			
IC303	1-817-585-11	JACK, LIGHT FIDER CONNECTOR (OPTICAL DIGITAL OUT (CD))			
J301	1-566-891-11	JACK (LINE IN)			
		< CONNECTOR >			
* KH332	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
		< RESISTOR >			
R160	1-216-837-11	METAL CHIP	22K	5%	1/10W
R260	1-216-837-11	METAL CHIP	22K	5%	1/10W
**********					
		HEADPHONE BOARD			
		**********			
		< JACK >			
J321	1-815-325-11	JACK (PHONES)			
		< CONNECTOR >			
KH324	1-824-030-11	HOLDER, CABLE 5P			
		< RESISTOR >			
R132	1-216-809-11	METAL CHIP	100	5%	1/10W
R232	1-216-809-11	METAL CHIP	100	5%	1/10W
**********					
	1-689-172-12	JOG BOARD			
		**********			
		< ROTARY ENCODER >			
RE401	1-476-747-11	ENCODER (– ⏮ ⏭ +)			
**********					
*	A-4547-017-A	LCD BOARD, COMPLETE			
		**********			
	3-247-669-01	HOLDER, LCD			
	3-247-675-01	PLATE, LIGHT GUIDE			
	3-250-762-01	HOLDER (REMOTE)			
	3-254-939-01	SHEET (23 PIN FFC), PROTECTION			

LCD MAIN

Ref. No.	Part No.	Description			Remark
	3-254-940-01	SHEET (6 PIN FFC), PROTECTION			
		< CAPACITOR >			
C401	1-115-156-11	CERAMIC CHIP	1uF		10V
		< CONNECTOR >			
* CN411	1-566-758-11	PIN, CONNECTOR (PC BOARD) 3P			
		< LED >			
D406	8-719-059-97	LED L-34HD (OPR/BATT)			
		< IC >			
IC401	6-600-108-01	IC RPM7140			
		< SHORT >			
JC405	1-216-864-11	SHORT CHIP	0		
		< LIQUID CRYSTAL DISPLAY >			
LCD401	1-805-533-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< RESISTOR >			
R401	1-216-813-11	METAL CHIP	220	5%	1/10W
R402	1-216-817-11	METAL CHIP	470	5%	1/10W
R403	1-216-817-11	METAL CHIP	470	5%	1/10W
R404	1-216-817-11	METAL CHIP	470	5%	1/10W
R405	1-216-821-11	METAL CHIP	1K	5%	1/10W
R406	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R407	1-216-821-11	METAL CHIP	1K	5%	1/10W
R408	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R409	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R410	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R411	1-216-833-11	METAL CHIP	10K	5%	1/10W
R412	1-216-833-11	METAL CHIP	10K	5%	1/10W
R413	1-216-813-11	METAL CHIP	220	5%	1/10W
R414	1-216-817-11	METAL CHIP	470	5%	1/10W
R415	1-216-817-11	METAL CHIP	470	5%	1/10W
R416	1-216-817-11	METAL CHIP	470	5%	1/10W
R417	1-216-821-11	METAL CHIP	1K	5%	1/10W
R418	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R419	1-216-821-11	METAL CHIP	1K	5%	1/10W
R420	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R421	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R422	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R423	1-216-833-11	METAL CHIP	10K	5%	1/10W
R424	1-216-833-11	METAL CHIP	10K	5%	1/10W
R425	1-216-813-11	METAL CHIP	220	5%	1/10W
R438	1-216-821-11	METAL CHIP	1K	5%	1/10W
R439	1-216-821-11	METAL CHIP	1K	5%	1/10W
R440	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< SWITCH >			
S401	1-786-050-21	SWITCH, KEY BOARD (STANDBY)			
S402	1-786-050-21	SWITCH, KEY BOARD (OPERATE)			
S403	1-786-050-21	SWITCH, KEY BOARD (CLOCK/SLEEP/TIMER)			
S405	1-786-050-21	SWITCH, KEY BOARD (DISPLAY)			
S406	1-786-050-21	SWITCH, KEY BOARD (ENTER)			
S407	1-786-050-21	SWITCH, KEY BOARD (MODE)			
S408	1-786-050-21	SWITCH, KEY BOARD (VOLUME –)			
S409	1-786-050-21	SWITCH, KEY BOARD (■)			
S410	1-786-050-21	SWITCH, KEY BOARD (►II)			
S411	1-786-050-21	SWITCH, KEY BOARD (RADIO, BAND, AUTO PRESET)			
S412	1-786-050-21	SWITCH, KEY BOARD (LINE)			
S413	1-786-050-21	SWITCH, KEY BOARD (◄◄ TUNE–)			
S414	1-786-050-21	SWITCH, KEY BOARD (►► TUNE+)			
S415	1-786-050-21	SWITCH, KEY BOARD (VOLUME +)			
S416	1-786-050-21	SWITCH, KEY BOARD (MEGA BASS)			
**********					
*	A-4547-020-A	MAIN BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C110	1-115-871-11	ELECT	1uF	20%	50V
C122	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C124	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C125	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C126	1-115-871-11	ELECT	1uF	20%	50V
C133	1-126-794-11	ELECT	4.7uF	20%	50V
C134	1-126-794-11	ELECT	4.7uF	20%	50V
C160	1-126-794-11	ELECT	4.7uF	20%	50V
C161	1-126-794-11	ELECT	4.7uF	20%	50V
C162	1-115-871-11	ELECT	1uF	20%	50V
C163	1-115-156-11	CERAMIC CHIP	1uF		10V
C164	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C165	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C210	1-115-871-11	ELECT	1uF	20%	50V
C222	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C224	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C225	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C226	1-115-871-11	ELECT	1uF	20%	50V
C233	1-126-794-11	ELECT	4.7uF	20%	50V
C234	1-126-794-11	ELECT	4.7uF	20%	50V
C260	1-126-794-11	ELECT	4.7uF	20%	50V
C261	1-126-794-11	ELECT	4.7uF	20%	50V
C262	1-115-871-11	ELECT	1uF	20%	50V
C263	1-115-156-11	CERAMIC CHIP	1uF		10V
C264	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C265	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C331	1-126-926-11	ELECT	1000uF	20%	10V
C332	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C334	1-126-935-11	ELECT	470uF	20%	16V
C350	1-126-796-11	ELECT	22uF	20%	50V
C351	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C352	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C360	1-126-382-11	ELECT	100uF	20%	16V
C361	1-126-382-11	ELECT	100uF	20%	16V
C801	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C802	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C803	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C804	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C805	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C806	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C807	1-162-927-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description			Remark
C808	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C809	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C810	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C811	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C812	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C813	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C814	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C815	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C818	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C819	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C820	1-115-156-11	CERAMIC CHIP	1uF		10V
C821	1-115-156-11	CERAMIC CHIP	1uF		10V
C822	1-126-176-11	ELECT	220uF	20%	10V
C823	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C830	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C831	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C832	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C833	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C920	1-126-795-11	ELECT	10uF	20%	50V
C932	1-128-499-11	ELECT	220uF	20%	16V
C957	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C959	1-126-382-11	ELECT	100uF	20%	16V
C960	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN310	1-784-774-11	CONNECTOR, FFC 13P			
* CN311	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
* CN312	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
* CN313	1-564-713-11	PIN, CONNECTOR (SMALL TYPE) 11P			
CN331	1-815-447-11	PIN, CONNECTOR (PWB) 6P			
CN802	1-784-784-11	CONNECTOR, FFC 23P			
CN803	1-784-775-11	CONNECTOR, FFC 14P			
CN804	1-784-767-11	CONNECTOR, FFC 6P			
CNP314	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
		< DIODE >			
D322	8-719-988-61	DIODE 1SS355TE-17			
D801	8-719-083-93	DIODE KDS120-RTK			
D802	8-719-082-07	DIODE KDS121-RTK			
D920	8-719-082-07	DIODE KDS121-RTK			
D921	8-719-069-54	DIODE UDZSTE-175.1B			
D930	8-719-988-61	DIODE 1SS355TE-17			
D957	8-719-083-58	DIODE UDZSTE-173.9B			
		< IC >			
IC302	6-701-919-01	IC PT2257-S			
IC801	6-802-793-01	IC uPD789478GC-A04-8BT			
IC802	6-701-560-01	IC BD4727G-TR			
		< SHORT >			
JC804	1-216-864-11	SHORT CHIP	0		
JC805	1-216-864-11	SHORT CHIP	0		
JC850	1-216-864-11	SHORT CHIP	0		
JC851	1-216-864-11	SHORT CHIP	0		
		< CONNECTOR >			
KH802	1-824-028-11	HOLDER, CABLE 2P			

Ref. No.	Part No.	Description			Remark
		< COIL >			
L801	1-414-137-31	INDUCTOR	0.22uH		
L802	1-410-521-11	INDUCTOR	100uH		
L804	1-410-509-61	INDUCTOR	10uH		
L805	1-414-142-61	INDUCTOR	1uH		
		< TRANSISTOR >			
Q122	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q125	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q160	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q161	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q222	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q225	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q260	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q261	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q801	8-729-029-16	TRANSISTOR	DTC144VUA-T106		
Q802	8-729-028-90	TRANSISTOR	DTA143ZUA-T106		
Q803	8-729-029-13	TRANSISTOR	DTC143ZUA-T106		
Q805	8-729-028-92	TRANSISTOR	DTA144TUA-T106		
Q806	8-729-029-13	TRANSISTOR	DTC143ZUA-T106		
Q813	8-729-029-13	TRANSISTOR	DTC143ZUA-T106		
Q957	8-729-036-86	TRANSISTOR	KTC3203Y-AT		
Q958	8-729-028-90	TRANSISTOR	DTA143ZUA-T106		
Q959	8-729-029-13	TRANSISTOR	DTC143ZUA-T106		
		< RESISTOR >			
R125	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R126	1-216-817-11	METAL CHIP	470	5%	1/10W
R127	1-216-833-11	METAL CHIP	10K	5%	1/10W
R128	1-216-817-11	METAL CHIP	470	5%	1/10W
R140	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R143	1-216-845-11	METAL CHIP	100K	5%	1/10W
R145	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R146	1-216-849-11	METAL CHIP	220K	5%	1/10W
R147	1-216-821-11	METAL CHIP	1K	5%	1/10W
R149	1-216-821-11	METAL CHIP	1K	5%	1/10W
R158	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R161	1-216-841-11	METAL CHIP	47K	5%	1/10W
R162	1-216-849-11	METAL CHIP	220K	5%	1/10W
R163	1-216-821-11	METAL CHIP	1K	5%	1/10W
R164	1-216-845-11	METAL CHIP	100K	5%	1/10W
R165	1-216-841-11	METAL CHIP	47K	5%	1/10W
R166	1-216-821-11	METAL CHIP	1K	5%	1/10W
R225	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R226	1-216-817-11	METAL CHIP	470	5%	1/10W
R227	1-216-833-11	METAL CHIP	10K	5%	1/10W
R228	1-216-817-11	METAL CHIP	470	5%	1/10W
R240	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R243	1-216-845-11	METAL CHIP	100K	5%	1/10W
R245	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R246	1-216-849-11	METAL CHIP	220K	5%	1/10W
R247	1-216-821-11	METAL CHIP	1K	5%	1/10W
R249	1-216-821-11	METAL CHIP	1K	5%	1/10W
R258	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R261	1-216-841-11	METAL CHIP	47K	5%	1/10W
R262	1-216-849-11	METAL CHIP	220K	5%	1/10W
R263	1-216-821-11	METAL CHIP	1K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R264	1-216-845-11	METAL CHIP	100K	5%	1/10W
R265	1-216-841-11	METAL CHIP	47K	5%	1/10W
R266	1-216-821-11	METAL CHIP	1K	5%	1/10W
R322	1-216-833-11	METAL CHIP	10K	5%	1/10W
R330	1-216-809-11	METAL CHIP	100	5%	1/10W
R332	1-216-817-11	METAL CHIP	470	5%	1/10W
R350	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R351	1-216-833-11	METAL CHIP	10K	5%	1/10W
R352	1-216-833-11	METAL CHIP	10K	5%	1/10W
R353	1-216-833-11	METAL CHIP	10K	5%	1/10W
R354	1-216-817-11	METAL CHIP	470	5%	1/10W
R355	1-216-817-11	METAL CHIP	470	5%	1/10W
R801	1-216-833-11	METAL CHIP	10K	5%	1/10W
R802	1-216-833-11	METAL CHIP	10K	5%	1/10W
R803	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R804	1-216-841-11	METAL CHIP	47K	5%	1/10W
R805	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R806	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R807	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R808	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R809	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R810	1-216-821-11	METAL CHIP	1K	5%	1/10W
R811	1-216-821-11	METAL CHIP	1K	5%	1/10W
R812	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R813	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R814	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R815	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R816	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R817	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R818	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R819	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R820	1-216-837-11	METAL CHIP	22K	5%	1/10W
R821	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R822	1-216-833-11	METAL CHIP	10K	5%	1/10W
R823	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R824	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R825	1-216-853-11	METAL CHIP	470K	5%	1/10W
R826	1-216-821-11	METAL CHIP	1K	5%	1/10W
R827	1-216-845-11	METAL CHIP	100K	5%	1/10W
R828	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R830	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R831	1-216-837-11	METAL CHIP	22K	5%	1/10W
R832	1-216-817-11	METAL CHIP	470	5%	1/10W
R833	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R834	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R836	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R841	1-216-841-11	METAL CHIP	47K	5%	1/10W
R842	1-216-841-11	METAL CHIP	47K	5%	1/10W
R843	1-216-841-11	METAL CHIP	47K	5%	1/10W
R844	1-216-833-11	METAL CHIP	10K	5%	1/10W
R846	1-216-821-11	METAL CHIP	1K	5%	1/10W
R847	1-216-841-11	METAL CHIP	47K	5%	1/10W
R850	1-216-853-11	METAL CHIP	470K	5%	1/10W
R851	1-216-853-11	METAL CHIP	470K	5%	1/10W
R854	1-216-833-11	METAL CHIP	10K	5%	1/10W
R855	1-216-833-11	METAL CHIP	10K	5%	1/10W
R856	1-216-837-11	METAL CHIP	22K	5%	1/10W
R857	1-216-837-11	METAL CHIP	22K	5%	1/10W
R858	1-216-833-11	METAL CHIP	10K	5%	1/10W
R859	1-216-833-11	METAL CHIP	10K	5%	1/10W
R860	1-216-833-11	METAL CHIP	10K	5%	1/10W
R861	1-216-821-11	METAL CHIP	1K	5%	1/10W
R862	1-216-821-11	METAL CHIP	1K	5%	1/10W
R863	1-216-821-11	METAL CHIP	1K	5%	1/10W
R864	1-216-821-11	METAL CHIP	1K	5%	1/10W
R865	1-216-849-11	METAL CHIP	220K	5%	1/10W
R866	1-216-845-11	METAL CHIP	100K	5%	1/10W
R867	1-216-845-11	METAL CHIP	100K	5%	1/10W
R868	1-216-845-11	METAL CHIP	100K	5%	1/10W
R869	1-216-821-11	METAL CHIP	1K	5%	1/10W
R870	1-216-833-11	METAL CHIP	10K	5%	1/10W
R871	1-216-833-11	METAL CHIP	10K	5%	1/10W
R872	1-216-833-11	METAL CHIP	10K	5%	1/10W
R873	1-216-833-11	METAL CHIP	10K	5%	1/10W
R874	1-216-833-11	METAL CHIP	10K	5%	1/10W
R875	1-216-833-11	METAL CHIP	10K	5%	1/10W
R876	1-216-833-11	METAL CHIP	10K	5%	1/10W
R877	1-216-833-11	METAL CHIP	10K	5%	1/10W
R878	1-216-833-11	METAL CHIP	10K	5%	1/10W
R879	1-216-833-11	METAL CHIP	10K	5%	1/10W
R880	1-216-833-11	METAL CHIP	10K	5%	1/10W
R881	1-216-833-11	METAL CHIP	10K	5%	1/10W
R882	1-216-833-11	METAL CHIP	10K	5%	1/10W
R883	1-216-833-11	METAL CHIP	10K	5%	1/10W
R884	1-216-833-11	METAL CHIP	10K	5%	1/10W
R885	1-216-833-11	METAL CHIP	10K	5%	1/10W
R886	1-216-833-11	METAL CHIP	10K	5%	1/10W
R887	1-216-833-11	METAL CHIP	10K	5%	1/10W
R888	1-216-833-11	METAL CHIP	10K	5%	1/10W
R889	1-216-833-11	METAL CHIP	10K	5%	1/10W
R890	1-216-833-11	METAL CHIP	10K	5%	1/10W
R891	1-216-833-11	METAL CHIP	10K	5%	1/10W
R892	1-216-833-11	METAL CHIP	10K	5%	1/10W
R898	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R899	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R920	1-216-817-11	METAL CHIP	470	5%	1/10W
R922	1-216-813-11	METAL CHIP	220	5%	1/10W
R923	1-216-813-11	METAL CHIP	220	5%	1/10W
R930	1-216-821-11	METAL CHIP	1K	5%	1/10W
R931	1-216-821-11	METAL CHIP	1K	5%	1/10W
R932	1-216-821-11	METAL CHIP	1K	5%	1/10W
R933	1-216-821-11	METAL CHIP	1K	5%	1/10W
R934	1-216-817-11	METAL CHIP	470	5%	1/10W
R935	1-216-817-11	METAL CHIP	470	5%	1/10W
R958	1-216-813-11	METAL CHIP	220	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R960	1-216-833-11	METAL CHIP	10K	5%	1/10W

< VIBRATOR >

X801	1-795-950-11	VIBRATOR, CRYSTAL (32.768kHz)
X802	1-795-054-21	VIBRATOR, CERAMIC (4.19MHz)

****

Ref. No.	Part No.	Description			Remark
*	A-3683-403-A	POWER BOARD, COMPLETE			
		**********			
	1-533-233-31	FUSE HOLDER			
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S			
		< CAPACITOR >			
C128	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C129	1-126-786-11	ELECT	47uF	20%	16V
C130	1-126-382-11	ELECT	100uF	20%	16V
C131	1-126-926-11	ELECT	1000uF	20%	10V
C132	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C228	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C229	1-126-786-11	ELECT	47uF	20%	16V
C230	1-126-382-11	ELECT	100uF	20%	16V
C231	1-126-926-11	ELECT	1000uF	20%	10V
C232	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C322	1-126-786-11	ELECT	47uF	20%	16V
C323	1-126-795-11	ELECT	10uF	20%	50V
C324	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C333	1-126-796-11	ELECT	22uF	20%	50V
C901	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C902	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C903	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C904	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C906	1-126-795-11	ELECT	10uF	20%	50V
C910	1-126-937-11	ELECT	4700uF	20%	16V
C912	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C913	1-126-382-11	ELECT	100uF	20%	16V
C953	1-126-382-11	ELECT	100uF	20%	16V
C954	1-126-935-11	ELECT	470uF	20%	16V
C955	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C956	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C958	1-162-974-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
* CN901	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
		< DIODE >			
D323	8-719-988-61	DIODE 1SS355TE-17			
D901	8-719-063-79	DIODE 1N4002B			
D902	8-719-063-79	DIODE 1N4002B			
D903	8-719-063-79	DIODE 1N4002B			
D904	8-719-063-79	DIODE 1N4002B			
D905	8-719-058-24	DIODE RB501V-40TE-17			
D906	8-719-056-73	DIODE UDZ-TE-17-2.7B			
D907	8-719-988-61	DIODE 1SS355TE-17			
D910	8-719-988-61	DIODE 1SS355TE-17			
D953	8-719-978-33	DIODE DTZ-TT11-6.8B			
D954	8-719-978-33	DIODE DTZ-TT11-6.8B			
D956	8-719-988-61	DIODE 1SS355TE-17			
		< FUSE >			
⚠F901	1-533-468-22	FUSE, GLASS TUBE (DIA. 5) (T2.0AL/250V)			
		< IC >			
IC304	8-759-426-51	IC BA5417			

Ref. No.	Part No.	Description			Remark
IC910	6-703-285-01	IC S-812C33AUA-C2NT2G			
		< JACK >			
⚠J901	1-526-838-11	INLET, AC 2P (AC IN)			
		< SHORT >			
JC301	1-216-864-11	SHORT CHIP	0		
		< COIL >			
L910	1-414-142-61	INDUCTOR	1uH		
		< TRANSISTOR >			
Q124	8-729-029-10	TRANSISTOR	DTC143TUA-T106		
Q224	8-729-029-10	TRANSISTOR	DTC143TUA-T106		
Q952	8-729-040-76	TRANSISTOR	KTA1273-Y-AT		
Q953	8-729-905-34	TRANSISTOR	2SC4081-Q		
Q954	8-729-028-54	TRANSISTOR	KTC3205		
Q955	8-729-018-99	TRANSISTOR	2SD2394-F		
		< RESISTOR >			
R130	1-216-813-11	METAL CHIP	220	5%	1/10W
R131	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R142	1-216-817-11	METAL CHIP	470	5%	1/10W
R144	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R230	1-216-813-11	METAL CHIP	220	5%	1/10W
R231	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R242	1-216-817-11	METAL CHIP	470	5%	1/10W
R244	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R323	1-216-857-11	METAL CHIP	1M	5%	1/10W
R324	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R333	1-216-821-11	METAL CHIP	1K	5%	1/10W
R901	1-216-805-11	METAL CHIP	47	5%	1/10W
R950	1-216-841-11	METAL CHIP	47K	5%	1/10W
R951	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R952	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R953	1-216-821-11	METAL CHIP	1K	5%	1/10W
R954	1-216-821-11	METAL CHIP	1K	5%	1/10W
R955	1-216-833-11	METAL CHIP	10K	5%	1/10W
R956	1-216-821-11	METAL CHIP	1K	5%	1/10W
R957	1-216-821-11	METAL CHIP	1K	5%	1/10W
R961	1-216-821-11	METAL CHIP	1K	5%	1/10W
R962	1-216-821-11	METAL CHIP	1K	5%	1/10W
R968	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R969	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
		< TRANSFORMER >			
⚠T901	1-439-713-11	TRANSFORMER POWER			
**********					
*	A-3683-864-A	PRE BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C102	1-104-665-11	ELECT	100uF	20%	25V
C103	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C104	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

PRE RELAY TUNER

Ref. No.	Part No.	Description			Remark
C105	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C107	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C201	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C202	1-104-665-11	ELECT	100uF	20%	25V
C203	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C204	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C205	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C207	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C301	1-104-665-11	ELECT	100uF	20%	25V
C302	1-104-665-11	ELECT	100uF	20%	25V
C303	1-104-665-11	ELECT	100uF	20%	25V
C304	1-126-947-11	ELECT	47uF	20%	35V
C305	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C306	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C307	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C310	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
		< CONNECTOR >			
CN303	1-784-774-11	CONNECTOR, FFC 13P			
		< IC >			
IC301	8-759-264-71	IC TA2068N			
		< SHORT >			
JC301	1-216-864-11	SHORT CHIP	0		
JC302	1-216-864-11	SHORT CHIP	0		
JC303	1-216-864-11	SHORT CHIP	0		
JC304	1-216-864-11	SHORT CHIP	0		
JC305	1-216-864-11	SHORT CHIP	0		
JC306	1-216-295-00	SHORT CHIP	0		
JC307	1-216-864-11	SHORT CHIP	0		
JC308	1-216-295-00	SHORT CHIP	0		
JC309	1-216-864-11	SHORT CHIP	0		
		< TRANSISTOR >			
Q301	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q302	8-729-907-00	TRANSISTOR	DTC114EU		
Q303	8-729-907-00	TRANSISTOR	DTC114EU		
		< RESISTOR >			
R101	1-216-835-11	METAL CHIP	15K	5%	1/10W
R102	1-216-807-11	METAL CHIP	68	5%	1/10W
R103	1-216-843-11	METAL CHIP	68K	5%	1/10W
R104	1-216-835-11	METAL CHIP	15K	5%	1/10W
R105	1-216-835-11	METAL CHIP	15K	5%	1/10W
R106	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R110	1-216-809-11	METAL CHIP	100	5%	1/10W
R111	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R112	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R201	1-216-835-11	METAL CHIP	15K	5%	1/10W
R202	1-216-807-11	METAL CHIP	68	5%	1/10W
R203	1-216-843-11	METAL CHIP	68K	5%	1/10W
R204	1-216-835-11	METAL CHIP	15K	5%	1/10W
R205	1-216-835-11	METAL CHIP	15K	5%	1/10W
R206	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R210	1-216-025-11	RES-CHIP	100	5%	1/10W
R211	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R212	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R301	1-216-857-11	METAL CHIP	1M	5%	1/10W
R302	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R303	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R304	1-216-821-11	METAL CHIP	1K	5%	1/10W
R305	1-216-817-11	METAL CHIP	470	5%	1/10W
R306	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R307	1-216-797-11	METAL CHIP	10	5%	1/10W
R308	1-216-837-11	METAL CHIP	22K	5%	1/10W
R309	1-216-805-11	METAL CHIP	47	5%	1/10W
R310	1-216-857-11	METAL CHIP	1M	5%	1/10W
R311	1-216-857-11	METAL CHIP	1M	5%	1/10W
R314	1-216-817-11	METAL CHIP	470	5%	1/10W
R315	1-216-817-11	METAL CHIP	470	5%	1/10W
		< SWITCH >			
S301	1-786-126-11	SWITCH, SLIDE (REC/PB)			
		< TRANSFORMER >			
T301	1-416-041-11	TRANSFORMER, BIAS OSCILLATION			
**********					
*	A-3663-824-A	RELAY BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
* CN322	1-815-552-11	PIN, CONNECTOR (PWB) 4P			
* CN324	1-815-553-11	PIN, CONNECTOR (PWB) 5P			
CN325	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
CN326	1-815-443-21	PIN, CONNECTOR (PWB) 2P			
**********					
*	A-3683-401-A	TUNER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C2	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C3	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C4	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C5	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C6	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C7	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C8	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C9	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C10	1-126-960-11	ELECT	1uF	20%	50V
C11	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C12	1-126-963-11	ELECT	4.7uF	20%	50V
C14	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C15	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C18	1-126-934-11	ELECT	220uF	20%	16V
C20	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C21	1-126-960-11	ELECT	1uF	20%	50V
C22	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C23	1-126-960-11	ELECT	1uF	20%	50V
C24	1-162-960-11	CERAMIC CHIP	220PF	10%	50V

TUNER

Ref. No.	Part No.	Description			Remark
C25	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C29	1-104-665-11	ELECT	100uF	20%	25V
C30	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C31	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C32	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C33	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C34	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C35	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C37	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C39	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C40	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C41	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C42	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C43	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C44	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C45	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C46	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C48	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C49	1-161-772-11	CERAMIC	0.1uF	10%	25V
C51	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C52	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C53	1-137-194-81	FILM	0.47uF	5%	50V
C54	1-126-934-11	ELECT	220uF	20%	16V
C55	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C56	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C57	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C58	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C59	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C60	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C61	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C62	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C63	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C64	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C66	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C68	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C70	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C71	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C72	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C73	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C77	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C78	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C80	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C93	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C95	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< FILTER >			
CF2	1-795-426-11	FILTER, CERAMIC			
CF4	1-781-962-21	FILTER, CERAMIC			
		< CONNECTOR >			
* CNP1	1-785-663-11	PIN, CONNECTOR (PC BOARD) 11P			
		< TRIMMER >			
CT1	1-141-442-91	CAP, CERAMIC TRIMMER			
CT3	1-141-304-21	CAP, CERAMIC TRIMMER			
CT5	1-141-459-11	CAP, TRIMMER (SEAL TYPE)			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D1	8-719-078-48	DIODE KV1471ETR1-3			
D2	8-719-078-48	DIODE KV1471ETR1-3			
D3	8-719-050-69	DIODE KV1520N			
D10	8-719-988-61	DIODE 1SS355TE-17			
D11	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC1	6-700-512-01	IC TA2149BN			
IC2	8-759-483-40	IC LC72137M-TLM-E			
		< SHORT >			
JC1	1-216-864-11	SHORT CHIP	0		
JC2	1-216-864-11	SHORT CHIP	0		
JC3	1-216-864-11	SHORT CHIP	0		
JC4	1-216-864-11	SHORT CHIP	0		
JC5	1-216-864-11	SHORT CHIP	0		
JC6	1-216-864-11	SHORT CHIP	0		
JC22	1-216-864-11	SHORT CHIP	0		
JC23	1-216-864-11	SHORT CHIP	0		
JC24	1-216-864-11	SHORT CHIP	0		
JC33	1-216-864-11	SHORT CHIP	0		
JC34	1-216-864-11	SHORT CHIP	0		
		< COIL >			
L1	1-409-775-11	COIL, AIR-CORE			
L2	1-416-509-11	COIL, AIR-CORE			
L3	1-754-116-12	ANTENNA, FERRITE-ROD (LW MW)			
L4	1-411-199-31	COIL, MW/LW OSC			
L21	1-410-509-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q12	8-729-028-99	TRANSISTOR	DTC114YUA-T106		
Q14	8-729-905-35	TRANSISTOR	2SC4081-R		
Q41	8-729-920-31	TRANSISTOR	DTC343TK		
Q42	8-729-054-77	TRANSISTOR	2SC4098-T106-PQ		
Q43	8-729-920-38	TRANSISTOR	2SC2059K-N		
Q44	8-729-054-77	TRANSISTOR	2SC4098-T106-PQ		
Q61	8-729-106-07	FET	2SK514-H		
		< RESISTOR >			
R1	1-216-817-11	METAL CHIP	470	5%	1/10W
R2	1-216-817-11	METAL CHIP	470	5%	1/10W
R3	1-216-833-11	METAL CHIP	10K	5%	1/10W
R4	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7	1-216-853-11	METAL CHIP	470K	5%	1/10W
R9	1-216-845-11	METAL CHIP	100K	5%	1/10W
R10	1-216-805-11	METAL CHIP	47	5%	1/10W
R11	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R12	1-216-841-11	METAL CHIP	47K	5%	1/10W
R13	1-216-821-11	METAL CHIP	1K	5%	1/10W
R16	1-216-833-11	METAL CHIP	10K	5%	1/10W
R17	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R18	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R19	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R22	1-216-833-11	METAL CHIP	10K	5%	1/10W
R24	1-216-813-11	METAL CHIP	220	5%	1/10W

TUNER

Ref. No.	Part No.	Description			Remark
R30	1-216-835-11	METAL CHIP	15K	5%	1/10W
R31	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R32	1-216-845-11	METAL CHIP	100K	5%	1/10W
R40	1-216-853-11	METAL CHIP	470K	5%	1/10W
R41	1-216-833-11	METAL CHIP	10K	5%	1/10W
R42	1-216-845-11	METAL CHIP	100K	5%	1/10W
R43	1-216-833-11	METAL CHIP	10K	5%	1/10W
R50	1-216-821-11	METAL CHIP	1K	5%	1/10W
R51	1-216-833-11	METAL CHIP	10K	5%	1/10W
R52	1-216-809-11	METAL CHIP	100	5%	1/10W
R53	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R54	1-216-817-11	METAL CHIP	470	5%	1/10W
R56	1-216-815-11	METAL CHIP	330	5%	1/10W
R58	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R59	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R60	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R61	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R63	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R64	1-216-821-11	METAL CHIP	1K	5%	1/10W
R66	1-216-805-11	METAL CHIP	47	5%	1/10W
R91	1-216-813-11	METAL CHIP	220	5%	1/10W
R92	1-216-813-11	METAL CHIP	220	5%	1/10W
R93	1-216-821-11	METAL CHIP	1K	5%	1/10W
R94	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< TRANSFORMER >			
T1	1-433-741-11	TRANSFORMER, IF			
T2	1-419-465-11	COIL (DET)			
		< VIBRATOR >			
X1	1-795-449-11	VIBRATOR, CRYSTAL (75kHz)			
**********					
		MISCELLANEOUS			
		**********			
5	1-452-899-11	MAGNET			
403	1-757-689-11	CABLE, FLEXIBLE FLAT (16 CORE)			
551	X-2162-707-2	CHASSIS ASSY (RDP) (RP), MOTOR (including M701) (SPINDLE)			
⚠555	8-820-161-02	OPTICAL PICK-UP (KSS-213R/C2RP)			
ANT1	1-754-282-11	ANTENNA, TELESCOPIC			
⚠F901	1-533-468-22	FUSE, GLASS TUBE (DIA. 5) (T2AL/250V)			
HRP301	3-244-085-01	HEAD, R/P (RECORD/PLAY BACK)			
⚠J901	1-526-838-11	INLET, AC 2P (AC IN)			
M702	X-2162-712-2	GEAR ASSY (R) (RP), MOTOR (SLED)			
M901	3-244-082-01	PULLEY (MOTOR) (CAPSTAN/REEL)			
S901	1-692-960-11	SWITCH, PUSH (1 KEY) (CD LID OPEN/CLOSE)			
SP1	1-825-474-11	SPEAKER (8cm) (R)			
SP2	1-825-474-11	SPEAKER (8cm) (L)			
⚠T901	1-439-713-11	TRANSFORMER, POWER			
**********					
		ACCESSORIES			
		**********			
⚠	1-769-412-22	CORD, POWER			
⚠	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P(UK)			
	3-263-561-31	MANUAL, INSTRUCTION (ENGLISH, SPANISH) (AEP, UK)			
	3-263-561-41	MANUAL, INSTRUCTION (FRENCH, GERMAN) (AEP)			
	3-263-561-51	MANUAL, INSTRUCTION (PORTUGUESE, DUTCH) (AEP)			
	3-263-561-61	MANUAL, INSTRUCTION (ITALIAN) (IT)			
	3-263-561-71	MANUAL, INSTRUCTION (SWEDISH, FINNISH) (EE)			
	3-263-561-81	MANUAL, INSTRUCTION (POLISH, HUNGARIAN, CZECH) (EE)			
	3-263-561-91	MANUAL, INSTRUCTION (SLOVAKIAN, RUSSIAN) (EE)			
	3-263-859-41	LID, BATTERY CASE (SILVER) (for RMT-CE95AD/SC)			
	3-263-859-51	LID, BATTERY CASE (BLUE) (for RMT-CE90AD/LC)			
	A-3172-070-A	RMT-CE95AD/SC (for SILVER)			
	A-3172-202-A	RMT-CE90AD/LC (for BLUE)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.02	New